

## 14. Simultaneous SAR Analysis

### 14.1 Body SAR Simultaneous Transmission Analysis (Inactive).

#### 14.1.1 Simultaneous Teransmission Scenario with Bluetooth Ant.2 and 5 GHz MIMO WLAN and 6 GHz MIMO WLAN (Inactive)

Band		Main SAR	Bluetooth Ant.2 SAR	5 GHz MIMO WLAN SAR	6 GHz MIMO WLAN SAR	$\Sigma$ 1-g SAR	SPLSR					
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	1+2+3	1+2+4	1+2	1+3	1+4		
GSM 850	Rear	0.502	0.374	0.772	1.094	1.648	1.970	0.876	1.274	1.596	Yes	
	Left	0.026	0.447	0.239	0.069	0.712	0.542	0.473	0.265	0.095	No	
	Right	0.057	0.400	0.777	0.335	1.234	0.792	0.457	0.834	0.392	No	
	Top	0.531	0.122	0.372	0.121	1.025	0.774	0.653	0.903	0.652	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.070	0.400	0.443	0.027	0.913	0.497	0.470	0.513	0.097	No	
GSM 1900	Rear	1.027	0.374	0.772	1.094	2.173	2.495	1.401	1.799	2.121	Yes	
	Left	0.240	0.447	0.239	0.069	0.926	0.756	0.687	0.479	0.309	No	
	Right	0.086	0.400	0.777	0.335	1.263	0.821	0.486	0.863	0.421	No	
	Top	0.563	0.122	0.372	0.121	1.057	0.806	0.685	0.935	0.684	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.098	0.400	0.443	0.027	0.941	0.525	0.498	0.541	0.125	No	
UMTS Band 5	Rear	0.518	0.374	0.772	1.094	1.664	1.986	0.892	1.290	1.612	Yes	
	Left	0.068	0.447	0.239	0.069	0.754	0.584	0.515	0.307	0.137	No	
	Right	0.080	0.400	0.777	0.335	1.257	0.815	0.480	0.857	0.415	No	
	Top	0.653	0.122	0.372	0.121	1.147	0.896	0.775	1.025	0.774	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.098	0.400	0.443	0.027	0.941	0.525	0.498	0.541	0.125	No	
UMTS Band 4	Rear	1.251	0.374	0.772	1.094	2.397	2.719	1.625	2.023	2.345	Yes	
	Left	0.344	0.447	0.239	0.069	1.030	0.860	0.791	0.583	0.413	No	
	Right	0.096	0.400	0.777	0.335	1.273	0.831	0.496	0.873	0.431	No	
	Top	1.104	0.122	0.372	0.121	1.598	1.347	1.226	1.476	1.225	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.135	0.400	0.443	0.027	0.978	0.562	0.535	0.578	0.162	No	
UMTS Band 2	Rear	1.129	0.374	0.772	1.094	2.275	2.597	1.503	1.901	2.223	Yes	
	Left	0.375	0.447	0.239	0.069	1.061	0.891	0.822	0.614	0.444	No	
	Right	0.112	0.400	0.777	0.335	1.289	0.847	0.512	0.889	0.447	No	
	Top	0.961	0.122	0.372	0.121	1.455	1.204	1.083	1.333	1.082	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.117	0.400	0.443	0.027	0.960	0.544	0.517	0.560	0.144	No	
LTE Band 12	Rear	0.683	0.374	0.772	1.094	1.829	2.151	1.057	1.455	1.777	Yes	
	Left	0.116	0.447	0.239	0.069	0.802	0.632	0.563	0.355	0.185	No	
	Right	0.053	0.400	0.777	0.335	1.230	0.788	0.453	0.830	0.388	No	
	Top	0.586	0.122	0.372	0.121	1.080	0.829	0.708	0.958	0.707	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.052	0.400	0.443	0.027	0.895	0.479	0.452	0.495	0.079	No	
LTE Band 13	Rear	0.742	0.374	0.772	1.094	1.888	2.210	1.116	1.514	1.836	Yes	
	Left	0.106	0.447	0.239	0.069	0.792	0.622	0.553	0.345	0.175	No	
	Right	0.055	0.400	0.777	0.335	1.232	0.790	0.455	0.832	0.390	No	
	Top	0.727	0.122	0.372	0.121	1.221	0.970	0.849	1.099	0.848	No	
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No	
	Right Corner	0.073	0.400	0.443	0.027	0.916	0.500	0.473	0.516	0.100	No	

Band		Main SAR	Bluetooth Ant.2 SAR	5 GHz MIMO WLAN SAR	6 GHz MIMO WLAN SAR	$\Sigma$ 1-g SAR	SPLSR				
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	1+2+3	1+2+4	1+2	1+3	1+2+3	
LTE 25(2)	Rear	0.698	0.374	0.772	1.094	1.844	2.166	1.072	1.470	1.792	Yes
	Left	0.512	0.447	0.239	0.069	1.198	1.028	0.959	0.751	0.581	No
	Right	0.133	0.400	0.777	0.335	1.310	0.868	0.533	0.910	0.468	No
	Top	1.114	0.122	0.372	0.121	1.608	1.357	1.236	1.486	1.235	Yes
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No
	Right Corner	0.132	0.400	0.443	0.027	0.975	0.559	0.532	0.575	0.159	No
LTE 26	Rear	0.539	0.374	0.772	1.094	1.685	2.007	0.913	1.311	1.633	Yes
	Left	0.078	0.447	0.239	0.069	0.764	0.594	0.525	0.317	0.147	No
	Right	0.092	0.400	0.777	0.335	1.269	0.827	0.492	0.869	0.427	No
	Top	0.721	0.122	0.372	0.121	1.215	0.964	0.843	1.093	0.842	No
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No
	Right Corner	0.086	0.400	0.443	0.027	0.929	0.513	0.486	0.529	0.113	No
LTE 41	Rear	0.781	0.374	0.772	1.094	1.927	2.249	1.155	1.553	1.875	Yes
	Left	0.109	0.447	0.239	0.069	0.795	0.625	0.556	0.348	0.178	No
	Right	0.081	0.400	0.777	0.335	1.258	0.816	0.481	0.858	0.416	No
	Top	0.690	0.122	0.372	0.121	1.184	0.933	0.812	1.062	0.811	No
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No
	Right Corner	0.154	0.400	0.443	0.027	0.997	0.581	0.554	0.597	0.181	No
LTE 66	Rear	1.218	0.374	0.772	1.094	2.364	2.686	1.592	1.990	2.312	Yes
	Left	0.352	0.447	0.239	0.069	1.038	0.868	0.799	0.591	0.421	No
	Right	0.061	0.400	0.777	0.335	1.238	0.796	0.461	0.838	0.396	No
	Top	1.113	0.122	0.372	0.121	1.607	1.356	1.235	1.485	1.234	Yes
	Left Corner	0.400	0.167	0.195	0.067	0.762	0.634	0.567	0.595	0.467	No
	Right Corner	0.062	0.400	0.443	0.027	0.905	0.489	0.462	0.505	0.089	No

**14.1.2 Simultaneous Teransmission Scenario with Bluetooth Ant.1 and 5 GHz MIMO WLAN and 6 GHz MIMO WLAN and 2.4 GHz Ant.2 WLANand 2.4 GHz MIMO WLAN**

Band		Main SAR	Bluetooth Ant.1 SAR	5 GHz MIMO WLAN SAR	6 GHz MIMO WLAN SAR	2.4 GHz Ant.2 WLAN SAR	2.4 GHz MIMO WLAN SAR	$\sum$ 1-g SAR	SPLSR					
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	5	6	1+2+3	1+2+4	1+2+5	1+2	1+6		
GSM 850	Rear	0.502	0.659	0.772	1.094	0.676	0.963	1.933	2.255	1.837	1.161	1.465	Yes	
	Left	0.026	0.011	0.239	0.069	0.755	0.930	0.276	0.106	0.792	0.037	0.956	No	
	Right	0.057	0.554	0.777	0.335	0.400	0.927	1.388	0.946	1.011	0.611	0.984	No	
	Top	0.531	0.367	0.372	0.121	0.169	0.579	1.270	1.019	1.067	0.898	1.110	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.070	0.298	0.443	0.027	0.400	0.540	0.811	0.395	0.768	0.368	0.610	No	
GSM 1900	Rear	1.027	0.659	0.772	1.094	0.676	0.963	2.458	2.780	2.362	1.686	1.990	Yes	
	Left	0.240	0.011	0.239	0.069	0.755	0.930	0.490	0.320	1.006	0.251	1.170	No	
	Right	0.086	0.554	0.777	0.335	0.400	0.927	1.417	0.975	1.040	0.640	1.013	No	
	Top	0.563	0.367	0.372	0.121	0.169	0.579	1.302	1.051	1.099	0.930	1.142	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.098	0.298	0.443	0.027	0.400	0.540	0.839	0.423	0.796	0.396	0.638	No	
UMTS Band 5	Rear	0.518	0.659	0.772	1.094	0.676	0.963	1.949	2.271	1.853	1.177	1.481	Yes	
	Left	0.068	0.011	0.239	0.069	0.755	0.930	0.318	0.148	0.834	0.079	0.998	No	
	Right	0.080	0.554	0.777	0.335	0.400	0.927	1.411	0.969	1.034	0.634	1.007	No	
	Top	0.653	0.367	0.372	0.121	0.169	0.579	1.392	1.141	1.189	1.020	1.232	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.098	0.298	0.443	0.027	0.400	0.540	0.839	0.423	0.796	0.396	0.638	No	
UMTS Band 4	Rear	1.251	0.659	0.772	1.094	0.676	0.963	2.682	3.004	2.586	1.910	2.214	Yes	
	Left	0.344	0.011	0.239	0.069	0.755	0.930	0.594	0.424	1.110	0.355	1.274	No	
	Right	0.096	0.554	0.777	0.335	0.400	0.927	1.427	0.985	1.050	0.650	1.023	No	
	Top	1.104	0.367	0.372	0.121	0.169	0.579	1.843	1.592	1.640	1.471	1.683	Yes	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.135	0.298	0.443	0.027	0.400	0.540	0.876	0.460	0.833	0.433	0.675	No	
UMTS Band 2	Rear	1.129	0.659	0.772	1.094	0.676	0.963	2.560	2.882	2.464	1.788	2.092	Yes	
	Left	0.375	0.011	0.239	0.069	0.755	0.930	0.625	0.455	1.141	0.386	1.305	No	
	Right	0.112	0.554	0.777	0.335	0.400	0.927	1.443	1.001	1.066	0.666	1.039	No	
	Top	0.961	0.367	0.372	0.121	0.169	0.579	1.700	1.449	1.497	1.328	1.540	Yes	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.117	0.298	0.443	0.027	0.400	0.540	0.858	0.442	0.815	0.415	0.657	No	
LTE Band 12	Rear	0.683	0.659	0.772	1.094	0.676	0.963	2.114	2.436	2.018	1.342	1.646	Yes	
	Left	0.116	0.011	0.239	0.069	0.755	0.930	0.366	0.196	0.882	0.127	1.046	No	
	Right	0.053	0.554	0.777	0.335	0.400	0.927	1.384	0.942	1.007	0.607	0.980	No	
	Top	0.586	0.367	0.372	0.121	0.169	0.579	1.325	1.074	1.122	0.953	1.165	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.052	0.298	0.443	0.027	0.400	0.540	0.793	0.377	0.750	0.350	0.592	No	
LTE Band 13	Rear	0.742	0.659	0.772	1.094	0.676	0.963	2.173	2.495	2.077	1.401	1.705	Yes	
	Left	0.106	0.011	0.239	0.069	0.755	0.930	0.356	0.186	0.872	0.117	1.036	No	
	Right	0.055	0.554	0.777	0.335	0.400	0.927	1.386	0.944	1.009	0.609	0.982	No	
	Top	0.727	0.367	0.372	0.121	0.169	0.579	1.466	1.215	1.263	1.094	1.306	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.073	0.298	0.443	0.027	0.400	0.540	0.814	0.398	0.771	0.371	0.613	No	

Band		Main SAR	Bluetooth Ant.1 SAR	5 GHz MIMO WLAN SAR	6 GHz MIMO WLAN SAR	2.4 GHz Ant.2 WLAN SAR	2.4 GHz MIMO WLAN SAR	$\Sigma$ 1-g SAR	SPLSR					
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	5	6	1+2+3	1+2+4	1+2+5	1+2	1+6		
LTE 25(2)	Rear	0.698	0.659	0.772	1.094	0.676	0.963	2.129	2.451	2.033	1.357	1.661	Yes	
	Left	0.512	0.011	0.239	0.069	0.755	0.930	0.762	0.592	1.278	0.523	1.442	No	
	Right	0.133	0.554	0.777	0.335	0.400	0.927	1.464	1.022	1.087	0.687	1.060	No	
	Top	1.114	0.367	0.372	0.121	0.169	0.579	1.853	1.602	1.650	1.481	1.693	Yes	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.132	0.298	0.443	0.027	0.400	0.540	0.873	0.457	0.830	0.430	0.672	No	
LTE 26	Rear	0.539	0.659	0.772	1.094	0.676	0.963	1.970	2.292	1.874	1.198	1.502	Yes	
	Left	0.078	0.011	0.239	0.069	0.755	0.930	0.328	0.158	0.844	0.089	1.008	No	
	Right	0.092	0.554	0.777	0.335	0.400	0.927	1.423	0.981	1.046	0.646	1.019	No	
	Top	0.721	0.367	0.372	0.121	0.169	0.579	1.460	1.209	1.257	1.088	1.300	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.086	0.298	0.443	0.027	0.400	0.540	0.827	0.411	0.784	0.384	0.626	No	
LTE 41	Rear	0.781	0.659	0.772	1.094	0.676	0.963	2.212	2.534	2.116	1.440	1.744	Yes	
	Left	0.109	0.011	0.239	0.069	0.755	0.930	0.359	0.189	0.875	0.120	1.039	No	
	Right	0.081	0.554	0.777	0.335	0.400	0.927	1.412	0.970	1.035	0.635	1.008	No	
	Top	0.690	0.367	0.372	0.121	0.169	0.579	1.429	1.178	1.226	1.057	1.269	No	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.154	0.298	0.443	0.027	0.400	0.540	0.895	0.479	0.852	0.452	0.694	No	
LTE 66	Rear	1.218	0.659	0.772	1.094	0.676	0.963	2.649	2.971	2.553	1.877	2.181	Yes	
	Left	0.352	0.011	0.239	0.069	0.755	0.930	0.602	0.432	1.118	0.363	1.282	No	
	Right	0.061	0.554	0.777	0.335	0.400	0.927	1.392	0.950	1.015	0.615	0.988	No	
	Top	1.113	0.367	0.372	0.121	0.169	0.579	1.852	1.601	1.649	1.480	1.692	Yes	
	Left Corner	0.400	0.400	0.195	0.067	0.228	0.138	0.995	0.867	1.028	0.800	0.538	No	
	Right Corner	0.062	0.298	0.443	0.027	0.400	0.540	0.803	0.387	0.760	0.360	0.602	No	

**14.1.3 Simultaneous Teransmission Scenario with 2.4 GHz MIMO RSDB WLAN and 5 GHz MIMO RSDB WLAN and 6 GHz MIMO RSDB WLAN**

Band		Main	2.4GHZ MIMO WLAN RSDB SAR	5 GHz MIMO WLAN RSDB SAR	6 GHz MIMO WLAN RSDB SAR	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/ No)
		1	2	3	4	1+2+3	1+2+4	
GSM 850	Rear	0.502	0.542	0.617	0.764	1.661	1.808	Yes
	Left	0.026	0.459	0.156	0.036	0.641	0.521	No
	Right	0.057	0.519	0.508	0.219	1.084	0.795	No
	Top	0.531	0.319	0.255	0.065	1.105	0.915	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.070	0.297	0.268	0.077	0.635	0.444	No
GSM 1900	Rear	1.027	0.542	0.617	0.764	2.186	2.333	Yes
	Left	0.240	0.459	0.156	0.036	0.855	0.735	No
	Right	0.086	0.519	0.508	0.219	1.113	0.824	No
	Top	0.563	0.319	0.255	0.065	1.137	0.947	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.098	0.297	0.268	0.077	0.663	0.472	No
UMTS Band 5	Rear	0.518	0.542	0.617	0.764	1.677	1.824	Yes
	Left	0.068	0.459	0.156	0.036	0.683	0.563	No
	Right	0.080	0.519	0.508	0.219	1.107	0.818	No
	Top	0.653	0.319	0.255	0.065	1.227	1.037	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.098	0.297	0.268	0.077	0.663	0.472	No
UMTS Band 4	Rear	1.251	0.542	0.617	0.764	2.410	2.557	Yes
	Left	0.344	0.459	0.156	0.036	0.959	0.839	No
	Right	0.096	0.519	0.508	0.219	1.123	0.834	No
	Top	1.104	0.319	0.255	0.065	1.678	1.488	Yes
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.135	0.297	0.268	0.077	0.700	0.509	No
UMTS Band 2	Rear	1.129	0.542	0.617	0.764	2.288	2.435	Yes
	Left	0.375	0.459	0.156	0.036	0.990	0.870	No
	Right	0.112	0.519	0.508	0.219	1.139	0.850	No
	Top	0.961	0.319	0.255	0.065	1.535	1.345	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.117	0.297	0.268	0.077	0.682	0.491	No
LTE Band 12	Rear	0.683	0.542	0.617	0.764	1.842	1.989	Yes
	Left	0.116	0.459	0.156	0.036	0.731	0.611	No
	Right	0.053	0.519	0.508	0.219	1.080	0.791	No
	Top	0.586	0.319	0.255	0.065	1.160	0.970	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.052	0.297	0.268	0.077	0.617	0.426	No
LTE Band 13	Rear	0.742	0.542	0.617	0.764	1.901	2.048	Yes
	Left	0.106	0.459	0.156	0.036	0.721	0.601	No
	Right	0.055	0.519	0.508	0.219	1.082	0.793	No
	Top	0.727	0.319	0.255	0.065	1.301	1.111	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.073	0.297	0.268	0.077	0.638	0.447	No

Band		Main	2.4GHZ MIMO WLAN	5 GHz MIMO WLAN	6 GHz MIMO WLAN	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
			RSDB SAR	RSDB SAR	RSDB SAR			
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/ No)
		1	2	3	4	1+2+3	1+2+4	
LTE 25(2)	Rear	0.698	0.542	0.617	0.764	1.857	2.004	Yes
	Left	0.512	0.459	0.156	0.036	1.127	1.007	No
	Right	0.133	0.519	0.508	0.219	1.160	0.871	No
	Top	1.114	0.319	0.255	0.065	1.688	1.498	Yes
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.132	0.297	0.268	0.077	0.697	0.506	No
LTE 26	Rear	0.539	0.542	0.617	0.764	1.698	1.845	Yes
	Left	0.078	0.459	0.156	0.036	0.693	0.573	No
	Right	0.092	0.519	0.508	0.219	1.119	0.830	No
	Top	0.721	0.319	0.255	0.065	1.295	1.105	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.086	0.297	0.268	0.077	0.651	0.460	No
LTE 41	Rear	0.781	0.542	0.617	0.764	1.940	2.087	Yes
	Left	0.109	0.459	0.156	0.036	0.724	0.604	No
	Right	0.081	0.519	0.508	0.219	1.108	0.819	No
	Top	0.690	0.319	0.255	0.065	1.264	1.074	No
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.154	0.297	0.268	0.077	0.719	0.528	No
LTE 66	Rear	1.218	0.542	0.617	0.764	2.377	2.524	Yes
	Left	0.352	0.459	0.156	0.036	0.967	0.847	No
	Right	0.061	0.519	0.508	0.219	1.088	0.799	No
	Top	1.113	0.319	0.255	0.065	1.687	1.497	Yes
	Left Corner	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.062	0.297	0.268	0.077	0.627	0.436	No

**14.1.4 Simultaneous Teransmission Scenario with Bluetooth Ant.1 and 5 GHz MIMO WLAN and 6 GHz MIMO WLAN and 2.4 GHz Ant.2 RSDB and 5 GHz MIMO RSDB WLAN and 6 GHz MIMO RSDB WLAN**

Band		Main	Bluetooth 1	2.4 GHz Ant2 WLAN RSDB SAR	5GHz MIMO WLAN RSDB SAR	6 GHz MIMO WLAN RSDB SAR	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	5	1+2+3+4	1+2+3+5	
GSM 850	Rear	0.502	0.455	0.542	0.617	0.764	1.661	1.808	Yes
	Left	0.026	0.011	0.459	0.156	0.036	0.641	0.521	No
	Right	0.057	0.440	0.519	0.508	0.219	1.084	0.795	No
	Top	0.531	0.250	0.319	0.255	0.065	1.105	0.915	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.070	0.201	0.297	0.268	0.077	0.635	0.444	No
GSM 1900	Rear	1.027	0.455	0.542	0.617	0.764	2.186	2.333	Yes
	Left	0.240	0.011	0.459	0.156	0.036	0.855	0.735	No
	Right	0.086	0.440	0.519	0.508	0.219	1.113	0.824	No
	Top	0.563	0.250	0.319	0.255	0.065	1.137	0.947	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.098	0.201	0.297	0.268	0.077	0.663	0.472	No
UMTS Band 5	Rear	0.518	0.455	0.542	0.617	0.764	1.677	1.824	Yes
	Left	0.068	0.011	0.459	0.156	0.036	0.683	0.563	No
	Right	0.080	0.440	0.519	0.508	0.219	1.107	0.818	No
	Top	0.653	0.250	0.319	0.255	0.065	1.227	1.037	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.098	0.201	0.297	0.268	0.077	0.663	0.472	No
UMTS Band 4	Rear	1.251	0.455	0.542	0.617	0.764	2.410	2.557	Yes
	Left	0.344	0.011	0.459	0.156	0.036	0.959	0.839	No
	Right	0.096	0.440	0.519	0.508	0.219	1.123	0.834	No
	Top	1.104	0.250	0.319	0.255	0.065	1.678	1.488	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.135	0.201	0.297	0.268	0.077	0.700	0.509	No
UMTS Band 2	Rear	1.129	0.455	0.542	0.617	0.764	2.288	2.435	Yes
	Left	0.375	0.011	0.459	0.156	0.036	0.990	0.870	No
	Right	0.112	0.440	0.519	0.508	0.219	1.139	0.850	No
	Top	0.961	0.250	0.319	0.255	0.065	1.535	1.345	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.117	0.201	0.297	0.268	0.077	0.682	0.491	No
LTE Band 12	Rear	0.683	0.455	0.542	0.617	0.764	1.842	1.989	Yes
	Left	0.116	0.011	0.459	0.156	0.036	0.731	0.611	No
	Right	0.053	0.440	0.519	0.508	0.219	1.080	0.791	No
	Top	0.586	0.250	0.319	0.255	0.065	1.160	0.970	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.052	0.201	0.297	0.268	0.077	0.617	0.426	No
LTE Band 13	Rear	0.742	0.455	0.542	0.617	0.764	1.901	2.048	Yes
	Left	0.106	0.011	0.459	0.156	0.036	0.721	0.601	No
	Right	0.055	0.440	0.519	0.508	0.219	1.082	0.793	No
	Top	0.727	0.250	0.319	0.255	0.065	1.301	1.111	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.073	0.201	0.297	0.268	0.077	0.638	0.447	No

Band		Main	Bluetooth 1	2.4 GHz Ant2 WLAN	5GHz MIMO WLAN	6 GHz MIMO WLAN	$\Sigma$ 1-g SAR	$\Sigma$ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	RSDB SAR	RSDB SAR	RSDB SAR	(W/kg)	(W/kg)	(Yes/No)
		1	2	3	4	5	1+2+3+4	1+2+3+5	
LTE 25(2)	Rear	0.698	0.455	0.542	0.617	0.764	1.857	2.004	Yes
	Left	0.512	0.011	0.459	0.156	0.036	1.127	1.007	No
	Right	0.133	0.440	0.519	0.508	0.219	1.160	0.871	No
	Top	1.114	0.250	0.319	0.255	0.065	1.688	1.498	Yes
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.132	0.201	0.297	0.268	0.077	0.697	0.506	No
LTE 26	Rear	0.539	0.455	0.542	0.617	0.764	1.698	1.845	Yes
	Left	0.078	0.011	0.459	0.156	0.036	0.693	0.573	No
	Right	0.092	0.440	0.519	0.508	0.219	1.119	0.830	No
	Top	0.721	0.250	0.319	0.255	0.065	1.295	1.105	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.086	0.201	0.297	0.268	0.077	0.651	0.460	No
LTE 41	Rear	0.781	0.455	0.542	0.617	0.764	1.940	2.087	Yes
	Left	0.109	0.011	0.459	0.156	0.036	0.724	0.604	No
	Right	0.081	0.440	0.519	0.508	0.219	1.108	0.819	No
	Top	0.690	0.250	0.319	0.255	0.065	1.264	1.074	No
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.154	0.201	0.297	0.268	0.077	0.719	0.528	No
LTE 66	Rear	1.218	0.455	0.542	0.617	0.764	2.377	2.524	Yes
	Left	0.352	0.011	0.459	0.156	0.036	0.967	0.847	No
	Right	0.061	0.440	0.519	0.508	0.219	1.088	0.799	No
	Top	1.113	0.250	0.319	0.255	0.065	1.687	1.497	Yes
	Left Corner	0.400	0.400	0.077	0.143	0.042	0.620	0.519	No
	Right Corner	0.062	0.201	0.297	0.268	0.077	0.627	0.436	No

**14.1.5 Simultaneous Teransmission Scenario with Bluetooth Ant.1 and 2.4GHz Ant.2 RSDB WLAN and 5 GHz MIMO RSDB WLAN and 6 GHz MIMO RSDB WLAN**

Band		Main SAR	EN-DC Anch or SAR	Bletooth Ant1	2.4GHz Ant 2 SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLS R	
NR	EN-DC	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)	
		1	2	3	4	5	6	1+2+3+4+5	1+2+3+5+6	1+2+3		
NR n5	LTE 66	Rear	0.312	1.218	0.455	0.377	0.617	0.764	2.979	3.126	1.985	Yes
		Left	0.061	0.352	0.011	0.751	0.156	0.036	1.331	1.211	0.424	No
		Right	0.031	0.061	0.440	0.000	0.508	0.219	1.040	0.751	0.532	No
		Top	0.371	1.113	0.250	0.111	0.255	0.065	2.100	1.910	1.734	Yes
		Bottom	0.400	0.400	0.008	0.027	0.000	0.000	0.835	0.835	0.808	No
		Left Corner	0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No
	Right Corner	0.090	0.062	0.201	0.000	0.268	0.077	0.621	0.430	0.353	No	
	LTE 25(2)	Rear	0.312	0.698	0.455	0.377	0.617	0.764	2.459	2.606	1.465	Yes
		Left	0.061	0.512	0.011	0.751	0.156	0.036	1.491	1.371	0.584	No
		Right	0.031	0.133	0.440	0.000	0.508	0.219	1.112	0.823	0.604	No
		Top	0.371	1.114	0.250	0.111	0.255	0.065	2.101	1.911	1.735	Yes
		Bottom	0.400	0.400	0.008	0.027	0.000	0.000	0.835	0.835	0.808	No
Left Corner		0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No	
Right Corner	0.090	0.132	0.201	0.000	0.268	0.077	0.691	0.500	0.423	No		
NR n66	Sub 1 Ant LTE B2 (only EN-DC)	Rear	0.975	0.737	0.455	0.377	0.617	0.764	3.161	3.308	2.167	Yes
		Left	0.347	0.324	0.011	0.751	0.156	0.036	1.589	1.469	0.682	No
		Right	0.081	0.254	0.440	0.000	0.508	0.219	1.283	0.994	0.775	No
		Top	0.580	0.400	0.250	0.111	0.255	0.065	1.596	1.406	1.230	No
		Bottom	0.400	0.719	0.008	0.027	0.000	0.000	1.154	1.154	1.127	No
		Left Corner	0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No
Right Corner	0.091	0.400	0.201	0.000	0.268	0.077	0.960	0.769	0.692	No		
NR n66	LTE 26(5)	Rear	0.975	0.539	0.455	0.377	0.617	0.764	2.963	3.110	1.969	Yes
		Left	0.347	0.078	0.011	0.751	0.156	0.036	1.343	1.223	0.436	No
		Right	0.081	0.092	0.440	0.000	0.508	0.219	1.121	0.832	0.613	No
		Top	0.580	0.721	0.250	0.111	0.255	0.065	1.917	1.727	1.551	Yes
		Bottom	0.400	0.400	0.008	0.027	0.000	0.000	0.835	0.835	0.808	No
		Left Corner	0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No
Right Corner	0.091	0.086	0.201	0.000	0.268	0.077	0.646	0.455	0.378	No		

Band		Main SAR	EN-DC Anch or SAR	Bletooth Ant1	2.4GHz Ant 2 SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLS R	
NR	EN-DC	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)	
		1	2	3	4	5	6	1+2+3+4+5	1+2+3+5+6	1+2+3		
NR n66	LTE 12	Rear	0.975	0.683	0.455	0.377	0.617	0.764	3.107	3.254	2.113	Yes
		Left	0.347	0.116	0.011	0.751	0.156	0.036	1.381	1.261	0.474	No
		Right	0.081	0.053	0.440	0.000	0.508	0.219	1.082	0.793	0.574	No
		Top	0.580	0.586	0.250	0.111	0.255	0.065	1.782	1.592	1.416	Yes
		Bottom	0.400	0.400	0.008	0.027	0.000	0.000	0.835	0.835	0.808	No
		Left Corner	0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No
		Right Corner	0.091	0.052	0.201	0.000	0.268	0.077	0.612	0.421	0.344	No
	LTE 13	Rear	0.975	0.742	0.455	0.377	0.617	0.764	3.166	3.313	2.172	Yes
		Left	0.347	0.106	0.011	0.751	0.156	0.036	1.371	1.251	0.464	No
		Right	0.081	0.055	0.440	0.000	0.508	0.219	1.084	0.795	0.576	No
		Top	0.580	0.727	0.250	0.111	0.255	0.065	1.923	1.733	1.557	Yes
		Bottom	0.400	0.400	0.008	0.027	0.000	0.000	0.835	0.835	0.808	No
		Left Corner	0.400	0.400	0.400	0.119	0.143	0.042	1.462	1.361	1.200	No
		Right Corner	0.091	0.073	0.201	0.000	0.268	0.077	0.633	0.442	0.365	No

**14.1.6 Simultaneous Teransmission Scenario with Bluetooth Ant.2 and 2.4 GHz Ant.2 RSDB WLAN and 2.4 GHz MIMO RSDB WLAN and 5 GHz MIMO RSDB WLAN and 6 GHz MIMO RSDB WLAN**

Band		Main SAR	EN-DC Anchor SAR	Bletooth Ant2	2.4GHz Ant2 SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	∑ 1-g SAR	SPL SR						
NR	EN-DC	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)	
		1	2	3	4	5	6	1+2+3+5	1+2+3+6	1+2+3	1+2+4	1+2+5	1+2+6		
NR n5	LTE 66	Rear	0.312	1.218	0.179	0.377	0.617	0.764	2.326	2.473	1.709	1.907	2.147	2.294	Yes
		Left	0.061	0.352	0.275	0.751	0.156	0.036	0.844	0.724	0.688	1.164	0.569	0.449	No
		Right	0.031	0.061	0.000	0.000	0.508	0.219	0.600	0.311	0.092	0.092	0.600	0.311	No
		Top	0.371	1.113	0.059	0.111	0.255	0.065	1.798	1.608	1.543	1.595	1.739	1.549	Yes
		Bottom	0.400	0.400	0.003	0.027	0.000	0.000	0.803	0.803	0.803	0.827	0.800	0.800	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.090	0.062	0.000	0.000	0.268	0.077	0.420	0.229	0.152	0.152	0.420	0.229	No
	LTE 2	Rear	0.312	0.698	0.179	0.377	0.617	0.764	1.806	1.953	1.189	1.387	1.627	1.774	Yes
		Left	0.061	0.512	0.275	0.751	0.156	0.036	1.004	0.884	0.848	1.324	0.729	0.609	No
		Right	0.031	0.133	0.000	0.000	0.508	0.219	0.672	0.383	0.164	0.164	0.672	0.383	No
		Top	0.371	1.114	0.059	0.111	0.255	0.065	1.799	1.609	1.544	1.596	1.740	1.550	Yes
		Bottom	0.400	0.400	0.003	0.027	0.000	0.000	0.803	0.803	0.803	0.827	0.800	0.800	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.090	0.132	0.000	0.000	0.268	0.077	0.490	0.299	0.222	0.222	0.490	0.299	No
NR n66	Sub 1 Ant LTE B2 (only EN-DC)	Rear	0.975	0.737	0.179	0.377	0.617	0.764	2.508	2.655	1.891	2.089	2.329	2.476	Yes
		Left	0.347	0.324	0.275	0.751	0.156	0.036	1.102	0.982	0.946	1.422	0.827	0.707	No
		Right	0.081	0.254	0.000	0.000	0.508	0.219	0.843	0.554	0.335	0.335	0.843	0.554	No
		Top	0.580	0.400	0.059	0.111	0.255	0.065	1.294	1.104	1.039	1.091	1.235	1.045	No
		Bottom	0.400	0.719	0.003	0.027	0.000	0.000	1.122	1.122	1.122	1.146	1.119	1.119	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.091	0.400	0.000	0.000	0.268	0.077	0.759	0.568	0.491	0.491	0.759	0.568	No
	LTE 5	Rear	0.975	0.539	0.179	0.377	0.617	0.764	2.310	2.457	1.693	1.891	2.131	2.278	Yes
		Left	0.347	0.078	0.275	0.751	0.156	0.036	0.856	0.736	0.700	1.176	0.581	0.461	No
		Right	0.081	0.092	0.000	0.000	0.508	0.219	0.681	0.392	0.173	0.173	0.681	0.392	No
		Top	0.580	0.721	0.059	0.111	0.255	0.065	1.615	1.425	1.360	1.412	1.556	1.366	Yes
		Bottom	0.400	0.400	0.003	0.027	0.000	0.000	0.803	0.803	0.803	0.827	0.800	0.800	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.091	0.086	0.000	0.000	0.268	0.077	0.445	0.254	0.177	0.177	0.445	0.254	No

Band		Main SAR	EN-DC Anchor SAR	Bletooth Ant2	2.4GHz Ant2 SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	∑ 1-g SAR	SPL SR						
NR	EN-DC	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)	
		1	2	3	4	5	6	1+2+3+5	1+2+3+6	1+2+3	1+2+4	1+2+5	1+2+6		
NR n66	LTE 12	Rear	0.975	0.683	0.179	0.377	0.617	0.764	2.454	2.601	1.837	2.035	2.275	2.422	Yes
		Left	0.347	0.116	0.275	0.751	0.156	0.036	0.894	0.774	0.738	1.214	0.619	0.499	No
		Right	0.081	0.053	0.000	0.000	0.508	0.219	0.642	0.353	0.134	0.134	0.642	0.353	No
		Top	0.580	0.586	0.059	0.111	0.255	0.065	1.480	1.290	1.225	1.277	1.421	1.231	No
		Bottom	0.400	0.400	0.003	0.027	0.000	0.000	0.803	0.803	0.803	0.827	0.800	0.800	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.091	0.052	0.000	0.000	0.268	0.077	0.411	0.220	0.143	0.143	0.411	0.220	No
	LTE 13	Rear	0.975	0.742	0.179	0.377	0.617	0.764	2.513	2.660	1.896	2.094	2.334	2.481	Yes
		Left	0.347	0.106	0.275	0.751	0.156	0.036	0.884	0.764	0.728	1.204	0.609	0.489	No
		Right	0.081	0.055	0.000	0.000	0.508	0.219	0.644	0.355	0.136	0.136	0.644	0.355	No
		Top	0.580	0.727	0.059	0.111	0.255	0.065	1.621	1.431	1.366	1.418	1.562	1.372	Yes
		Bottom	0.400	0.400	0.003	0.027	0.000	0.000	0.803	0.803	0.803	0.827	0.800	0.800	No
		Left Corner	0.400	0.400	0.087	0.119	0.143	0.042	1.030	0.929	0.887	0.919	0.943	0.842	No
		Right Corner	0.091	0.073	0.000	0.000	0.268	0.077	0.432	0.241	0.164	0.164	0.432	0.241	No

**14.1.7 Simultaneous Teransmission Scenario with 2.4 GHz MIMO RSDB WLAN and 5 GHz MIMO RSDB WLAN and 6 GHz MIMO RSDB WLAN.**

Band			Main SAR	EN-DC Anchor SAR	2.4GHz MIMO SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR
			(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)
			1	2	3	4	5	1+2+3+4	1+2+3+5	
NR n5	LTE 66	Rear	0.312	1.218	0.542	0.617	0.764	2.689	2.836	Yes
		Left	0.061	0.352	0.459	0.156	0.036	1.028	0.908	No
		Right	0.031	0.061	0.519	0.508	0.219	1.119	0.830	No
		Top	0.371	1.113	0.319	0.255	0.065	2.058	1.868	Yes
		Bottom	0.400	0.400	0.050	0.000	0.000	0.850	0.850	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
		Right Corner	0.090	0.062	0.297	0.268	0.077	0.717	0.526	No
	LTE 2	Rear	0.312	0.698	0.542	0.617	0.764	2.169	2.316	Yes
		Left	0.061	0.512	0.459	0.156	0.036	1.188	1.068	No
		Right	0.031	0.133	0.519	0.508	0.219	1.191	0.902	No
		Top	0.371	1.114	0.319	0.255	0.065	2.059	1.869	Yes
		Bottom	0.400	0.400	0.050	0.000	0.000	0.850	0.850	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
		Right Corner	0.090	0.132	0.297	0.268	0.077	0.787	0.596	No
NR n66	Sub 1 Ant LTE B2 (only EN-DC)	Rear	0.975	0.737	0.542	0.617	0.764	2.871	3.018	Yes
		Left	0.347	0.324	0.459	0.156	0.036	1.286	1.166	No
		Right	0.081	0.254	0.519	0.508	0.219	1.362	1.073	No
		Top	0.580	0.400	0.319	0.255	0.065	1.554	1.364	No
		Bottom	0.400	0.719	0.050	0.000	0.000	1.169	1.169	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
		Right Corner	0.091	0.400	0.297	0.268	0.077	1.056	0.865	No
	LTE 26(5)	Rear	0.975	0.539	0.542	0.617	0.764	2.673	2.820	Yes
		Left	0.347	0.078	0.459	0.156	0.036	1.040	0.920	No
		Right	0.081	0.092	0.519	0.508	0.219	1.200	0.911	No
		Top	0.580	0.721	0.319	0.255	0.065	1.875	1.685	Yes
		Bottom	0.400	0.400	0.050	0.000	0.000	0.850	0.850	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
		Right Corner	0.091	0.086	0.297	0.268	0.077	0.742	0.551	No

Band		Main SAR	EN-DC Anchor SAR	2.4GHz MIMO SAR RSDB	5 GHz MIMO WLAN SAR RSDB	6 GHz MIMO WLAN SAR RSDB	$\sum$ 1-g SAR	$\sum$ 1-g SAR	SPLSR	
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes/No)	
		1	2	3	4	5	1+2+3+4	1+2+3+5		
NR n66	LTE 12	Rear	0.975	0.683	0.542	0.617	0.764	2.817	2.964	Yes
		Left	0.347	0.116	0.459	0.156	0.036	1.078	0.958	No
		Right	0.081	0.053	0.519	0.508	0.219	1.161	0.872	No
		Top	0.580	0.586	0.319	0.255	0.065	1.740	1.550	Yes
		Bottom	0.400	0.400	0.050	0.000	0.000	0.850	0.850	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
	Right Corner	0.091	0.052	0.297	0.268	0.077	0.708	0.517	No	
	LTE 13	Rear	0.975	0.742	0.542	0.617	0.764	2.876	3.023	Yes
		Left	0.347	0.106	0.459	0.156	0.036	1.068	0.948	No
		Right	0.081	0.055	0.519	0.508	0.219	1.163	0.874	No
		Top	0.580	0.727	0.319	0.255	0.065	1.881	1.691	Yes
		Bottom	0.400	0.400	0.050	0.000	0.000	0.850	0.850	No
		Left Corner	0.400	0.400	0.077	0.143	0.042	1.020	0.919	No
	Right Corner	0.091	0.073	0.297	0.268	0.077	0.729	0.538	No	

## 14.2 SAR to Peak Location Separation Ratio (SPLSR)

FCC KDB 447498 D01v06 General RF Exposure Guidance introduces a new formula for calculating the SAR a Peak Location Separation Ratio(SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR_i = (SAR_1 + SAR_2)^{1.5} / R_i$$

Where:

$SAR_1$  is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

$SAR_2$  is the highest measured of estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

$R_i$  is the separation distance between the pair of simultaneous transmitting antennas, When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of  $[(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum 1-g of SAR > 1.6 W/kg and with the sum 10-g of SAR > 4 W/Kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04 \text{ for 1g SAR and } (SAR_1 + SAR_2)^{1.5} / R_i \leq 0.1 \text{ for 10g SAR}$$

### SPLSR Hotspot Combination

Per November 2019 TCB Workshop Notes, SPLSR Hotspot Combination procedure can be applied to evaluate to simultaneous transmission SAR analysis.

The antennas for the unlicensed transmitters are closely located. As a result, the associated SAR Hotspots are also closely located. Some of the sum of SAR calculations yielded results over 1.6W/kg. The SPLSR calculations for these situations were performed by treating the unlicensed SAR values as a single transmitter. The most conservative distance between all the unlicensed hotspots to the licensed hotspot was used for the value of d in SPLSR calculation.

Hybrid SPLSR and enlarged zoom scan (Volume scan) can be applied when Simultaneous transmission SAR is over 1.6 W/kg for 1g or 4.0W/kg for 10g respectively, it does not meet SPLSR criteria, and antenna pair is co-located. Antenna co-location means that SAR distributions overlap because the antenna pair are not significantly spatially separated.

### Test Procedure:

Step.1 perform enlarged zoom scan (Volume scan) on the co-located antenna pair to determine 1g/10g aggregate SAR.

Step.2 Apply SPLSR procedure for the spatially separated antenna and aggregate SAR distribution of the co-located antenna pair.

Per Sec. 14, below simultaneous transmission summations need to be calculated SPLSR.

### 14.2.1 SPLSR Evaluation

Mode/Band	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM 850	-13.5	151.5	-178	0.502
GSM 1900	-30	148.5	-178	1.027
UMTS Band 5	-13.5	150	-178	0.518
UMTS Band 4	-28.5	148.5	-178	1.251
UMTS Band 2	-30	148.5	-178	1.129
LTE Band12	-15	150	-178	0.683
LTE Band13	-13.5	150	-178	0.742
LTE Band25	-28.5	148.5	-178	0.698
LTE Band26	-13.5	150	-178	0.539
LTE Band41	-24	144	-178	0.781
LTE Band66	-18	148.5	-178	1.218
LTE Band2 Sub	-18.5	-148.5	-178	0.737
NR Band n5	-13.5	151.5	-178	0.312
NR Band n66	-28.5	148.54	-178	0.975
Bluetooth Ant1 Grip	-82.8	141.6	-182.2	0.658
Bluetooth Ant2 Grip	91.2	141.6	-180.7	0.374
Bluetooth Ant1 RSDB	-82.8	141.6	-182.2	0.455
Bluetooth Ant2 RSDB	91.2	141.6	-180.7	0.179
WLAN 2.4GHz Ant 2 Grip	91	138	-178	0.676
WLAN 2.4GHz MIMO Grip	-82.8	141.6	-182.2	0.963
WLAN 2.4GHz Ant 2 RSDB	91	138	-178	0.377
WLAN 2.4GHz MIMO RSDB	-82.8	141.6	-182.2	0.542
WLAN 5GHz MIMO Grip	89	138	-178	0.772
WLAN 5GHz MIMORSDB	89	138	-178	0.617
WLAN 6GHz MIMO Grip	85	136.2	-178	1.165
WLAN 6GHz MIMO RSDB	91.8	146.2	-178	0.774

## 14.2.2 SAR to Peak Location Ratio (SPLSR) Figures

### 14.2.2.1 Rear side

Band			$\sum$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
GSM 850	Bluetooth Ant1	5GHz MIMO	1.160	1.274	1.430	70.129	103.385	171.889	0.018	0.014	0.010	#1
GMS1900			1.685	1.799	1.430	55.106	118.111	171.889	0.040	0.020	0.010	#2
UMTS Band 5			1.176	1.290	1.430	96.757	76.448	171.889	0.013	0.019	0.010	#3
UMTS Band 4			1.909	2.023	1.430	54.898	117.968	171.889	0.048	0.024	0.010	Volume
UMTS Band 2			1.787	1.901	1.430	53.414	119.462	171.889	0.045	0.022	0.010	Volume
LTE Band 12			1.341	1.455	1.430	68.447	104.690	171.889	0.023	0.017	0.010	#4
LTE Band 13			1.400	1.514	1.430	69.933	103.200	171.889	0.024	0.018	0.010	#5
LTE Band 25(2)			1.356	1.470	1.430	54.898	117.968	171.889	0.029	0.015	0.010	#6
LTE Band 26			1.197	1.311	1.430	69.933	103.200	171.889	0.019	0.015	0.010	#7
LTE 41		1.439	1.553	1.430	58.999	113.159	171.889	0.029	0.017	0.010	#8	
LTE Band 66(4)		1.876	1.990	1.430	65.302	107.514	171.889	0.039	0.026	0.010	#9	
GSM 850		6GHz MIMO	1.160	1.596	1.752	70.129	105.433	174.711	0.018	0.019	0.013	#10
GMS1900			1.685	2.121	1.752	55.106	120.360	174.711	0.040	0.026	0.013	#11
UMTS Band 5			1.176	1.612	1.752	96.757	78.392	174.711	0.013	0.026	0.013	#12
UMTS Band 4			1.909	2.345	1.752	54.898	120.322	174.711	0.048	0.030	0.013	Volume
UMTS Band 2			1.787	2.223	1.752	53.414	121.822	174.711	0.045	0.027	0.013	Volume
LTE Band 12			1.341	1.777	1.752	68.447	106.868	174.711	0.023	0.022	0.013	#13
LTE Band 13			1.400	1.836	1.752	69.933	105.369	174.711	0.024	0.024	0.013	#14
LTE Band 25(2)	1.356		1.792	1.752	54.898	120.322	174.711	0.029	0.020	0.013	#15	
LTE Band 26	1.197		1.633	1.752	69.933	105.369	174.711	0.019	0.020	0.013	#16	
LTE 41	1.439	1.875	1.752	58.999	115.821	174.711	0.029	0.022	0.013	#17		
LTE Band 66(4)	1.876	2.312	1.752	65.302	109.824	174.711	0.039	0.032	0.013	#18		

Band			$\sum$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
GSM 850	Bluetooth Ant1	2.4GHz Ant2	1.160	1.178	1.334	70.129	105.368	173.912	0.018	0.012	0.009	#19
GMS1900			1.685	1.703	1.334	55.106	120.101	173.912	0.040	0.019	0.009	#20
UMTS Band 5			1.176	1.194	1.334	96.757	78.424	173.912	0.013	0.017	0.009	#21
UMTS Band 4			1.909	1.927	1.334	54.898	119.960	173.912	0.048	0.022	0.009	Volume
UMTS Band 2			1.787	1.805	1.334	53.414	121.455	173.912	0.045	0.020	0.009	Volume
LTE Band 12			1.341	1.359	1.334	68.447	106.677	173.912	0.023	0.015	0.009	#22
LTE Band 13			1.400	1.418	1.334	69.933	105.187	173.912	0.024	0.016	0.009	#23
LTE Band 25(2)			1.356	1.374	1.334	54.898	119.960	173.912	0.029	0.013	0.009	#24
LTE Band 26			1.197	1.215	1.334	69.933	105.187	173.912	0.019	0.013	0.009	#25
LTE 41			1.439	1.457	1.334	58.999	115.156	173.912	0.029	0.015	0.009	#26
LTE Band 66(4)			1.876	1.894	1.334	65.302	115.156	173.912	0.039	0.023	0.009	#27
GMS1900	2.4GHz MIMO		1.990			55.106			0.051			Volume
UMTS Band 4			2.214			54.898			0.060			Volume
UMTS Band 2			2.092			53.414			0.057			Volume
LTE Band 12			1.646			68.447			0.031			#28
LTE Band 13			1.705			69.933			0.032			#29
LTE Band 25(2)			1.661			54.898			0.039			#30
LTE 41			1.744			58.999			0.039			#31
LTE Band 66(4)			2.181			65.302			0.049			Volume

Band			$\Sigma$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
GSM 850	2.4GHz MIMO RSDB	5GHz MIMO RSDB	1.044	1.119	1.159	70.129	103.385	171.889	0.015	0.011	0.007	#32
GMS1900			1.044	1.644	1.159	55.106	118.111	171.889	0.019	0.018	0.007	#33
UMTS Band 5			1.060	1.135	1.159	96.757	76.448	171.889	0.011	0.016	0.007	#34
UMTS Band 4			1.793	1.868	1.159	54.898	117.968	171.889	0.044	0.022	0.007	Volume
UMTS Band 2			1.671	1.746	1.159	53.414	119.462	171.889	0.040	0.019	0.007	Volume
LTE Band 12			1.225	1.3	1.159	68.447	104.690	171.889	0.020	0.014	0.007	#35
LTE Band 13			1.284	1.359	1.159	69.933	103.200	171.889	0.021	0.015	0.007	#36
LTE Band 25(2)			1.240	1.315	1.159	54.898	117.968	171.889	0.025	0.013	0.007	#37
LTE Band 26			1.081	1.156	1.159	69.933	103.200	171.889	0.016	0.012	0.007	#38
LTE 41			1.323	1.398	1.159	58.999	113.159	171.889	0.026	0.015	0.007	#39
LTE Band 66(4)	1.760	1.835	1.159	65.302	107.514	171.889	0.036	0.023	0.007	#40		
GSM 850	2.4GHz MIMO RSDB	6GHz MIMO RSDB	1.044	1.266	1.306	70.129	105.433	174.711	0.015	0.014	0.009	#41
GMS1900			1.044	1.791	1.306	55.106	120.360	174.711	0.019	0.020	0.009	#42
UMTS Band 5			1.060	1.282	1.306	96.757	78.392	174.711	0.011	0.019	0.009	#43
UMTS Band 4			1.793	2.015	1.306	54.898	120.322	174.711	0.044	0.024	0.009	Volume
UMTS Band 2			1.671	1.893	1.306	53.414	121.822	174.711	0.040	0.021	0.009	Volume
LTE Band 12			1.225	1.447	1.306	68.447	106.868	174.711	0.020	0.016	0.009	#44
LTE Band 13			1.284	1.506	1.306	69.933	105.369	174.711	0.021	0.018	0.009	#45
LTE Band 25(2)			1.240	1.462	1.306	54.898	120.322	174.711	0.025	0.015	0.009	#46
LTE Band 26			1.081	1.303	1.306	69.933	105.369	174.711	0.016	0.014	0.009	#47
LTE 41			1.323	1.545	1.306	58.999	115.821	174.711	0.026	0.017	0.009	#48
LTE Band 66(4)	1.760	1.982	1.306	65.302	109.824	174.711	0.036	0.025	0.009	#49		

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance					
				(W/kg)						(mm)					
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4
NR Band n5	LTE 66	2.4GHz MIMO RSDB	5GHz MIMO RSDB	1.530	0.854	0.929	1.760	1.835	1.159	5.408	70.129	103.385	65.302	107.514	171.889
NR Band n5	LTE 25(2)			1.010	0.854	0.929	1.240	1.315	1.159	15.297	70.129	103.385	54.898	117.968	171.889
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.735	1.81	1.279	1.354	1.159	297.208	54.903	117.972	245.160	242.176	171.889
NR Band n66	LTE 5			1.732	1.735	1.81	1.081	1.156	1.159	15.071	54.903	117.972	69.933	103.200	171.889
NR Band n66	LTE 12			1.876	1.735	1.81	1.225	1.300	1.159	13.579	54.903	117.972	68.447	104.690	171.889
NR Band n66	LTE 13			1.935	1.735	1.81	1.284	1.359	1.159	15.071	54.903	117.972	69.933	103.200	171.889
NR Band n5	LTE 66		6GHz MIMO RSDB	1.530	0.854	1.076	1.760	1.982	1.306	5.408	70.129	105.433	65.302	109.824	174.711
NR Band n5	LTE 25(2)			1.010	0.854	1.076	1.240	1.462	1.306	15.297	70.129	105.433	54.898	120.322	174.711
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.735	1.957	1.279	1.501	1.306	297.208	54.903	120.323	245.160	247.963	174.711
NR Band n66	LTE 5			1.732	1.735	1.957	1.081	1.303	1.306	15.071	54.903	120.323	69.933	105.369	174.711
NR Band n66	LTE 12			1.876	1.735	1.957	1.225	1.447	1.306	13.579	54.903	120.323	68.447	106.868	174.711
NR Band n66	LTE 13			1.935	1.735	1.957	1.284	1.506	1.306	15.071	54.903	120.323	69.933	105.369	174.711

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance						
				(W/kg)						(mm)						
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4	
GSM 850	Bluetooth Ant1	2.4GHz ANT 2 RSDB	5GHz MIMO RSDB	0.957	0.879	1.119	0.832	1.072	0.994	70.129	105.368	103.385	173.888	171.889	2.000	
GSM1900				1.482	1.404	1.644	0.832	1.072	0.994	55.106	120.101	118.111	173.888	171.889	2.000	
UMTS Band 5				0.973	0.895	1.135	0.832	1.072	0.994	96.757	78.424	76.448	173.888	171.889	2.000	
UMTS Band 4				1.706	1.628	1.868	0.832	1.072	0.994	54.898	119.960	117.968	173.888	171.889	2.000	
UMTS Band 2				1.584	1.506	0.617	0.832	1.072	0.994	53.414	121.455	119.462	173.888	171.889	2.000	
LTE Band 12				1.138	1.060	1.300	0.832	1.072	0.994	68.447	106.677	104.690	173.888	171.889	2.000	
LTE Band 13				1.197	1.119	1.359	0.832	1.072	0.994	69.933	105.187	103.200	173.888	171.889	2.000	
LTE Band 25(2)				1.153	1.075	1.315	0.832	1.072	0.994	54.898	119.960	117.968	173.888	171.889	2.000	
LTE Band 26				0.994	0.916	1.156	0.832	1.072	0.994	69.933	105.187	103.200	173.888	171.889	2.000	
LTE 41				1.236	1.158	1.398	0.832	1.072	0.994	58.999	115.156	113.159	173.888	171.889	2.000	
LTE Band 66(4)			1.673	1.595	1.835	0.832	1.072	0.994	65.302	109.505	107.514	173.888	171.889	2.000		
GSM 850			6GHz MIMO RSDB		0.957	0.879	1.266	0.832	1.219	1.141	70.129	105.368	105.433	173.888	174.711	8.239
GSM1900					1.482	1.404	1.791	0.832	1.219	1.141	55.106	120.101	120.360	173.888	174.711	8.239
UMTS Band 5					0.973	0.895	1.282	0.832	1.219	1.141	96.757	78.424	78.392	173.888	174.711	8.239
UMTS Band 4					1.706	1.628	2.015	0.832	1.219	1.141	54.898	119.960	120.322	173.888	174.711	8.239
UMTS Band 2					1.584	1.506	0.764	0.832	1.219	1.141	53.414	121.455	121.822	173.888	174.711	8.239
LTE Band 12					1.138	1.060	1.447	0.832	1.219	1.141	68.447	106.677	106.868	173.888	174.711	8.239
LTE Band 13					1.197	1.119	1.506	0.832	1.219	1.141	69.933	105.187	105.369	173.888	174.711	8.239
LTE Band 25(2)					1.153	1.075	1.462	0.832	1.219	1.141	54.898	119.960	120.322	173.888	174.711	8.239
LTE Band 26					0.994	0.916	1.303	0.832	1.219	1.141	69.933	105.187	105.369	173.888	174.711	8.239
LTE 41	1.236	1.158			1.545	0.832	1.219	1.141	58.999	115.156	115.821	173.888	174.711	8.239		
LTE Band 66(4)	1.673	1.595	1.982	0.832	1.219	1.141	65.302	109.505	109.824	173.888	174.711	8.239				

Band				SPLSR						Hybrid
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	Volume
GSM 850	Bluetooth Ant1	2.4GHz ANT 2 RSDB	5GHz MIMO RSDB	0.013	0.008	0.011	0.004	0.006	0.496	Volume
GMS1900				0.033	0.014	0.018	0.004	0.006	0.496	Volume
UMTS Band 5				0.010	0.011	0.016	0.004	0.006	0.496	Volume
UMTS Band 4				0.041	0.017	0.022	0.004	0.006	0.496	Volume
UMTS Band 2				0.037	0.015	0.004	0.004	0.006	0.496	Volume
LTE Band 12				0.018	0.010	0.014	0.004	0.006	0.496	Volume
LTE Band 13				0.019	0.011	0.015	0.004	0.006	0.496	Volume
LTE Band 25(2)				0.023	0.009	0.013	0.004	0.006	0.496	Volume
LTE Band 26				0.014	0.008	0.012	0.004	0.006	0.496	Volume
LTE 41				0.023	0.011	0.015	0.004	0.006	0.496	Volume
LTE Band 66(4)				0.033	0.018	0.023	0.004	0.006	0.496	Volume
GSM 850			6GHz MIMO RSDB	0.013	0.008	0.014	0.004	0.008	0.148	Volume
GMS1900				0.033	0.014	0.020	0.004	0.008	0.148	Volume
UMTS Band 5				0.010	0.011	0.019	0.004	0.008	0.148	Volume
UMTS Band 4				0.041	0.017	0.024	0.004	0.008	0.148	Volume
UMTS Band 2				0.037	0.015	0.005	0.004	0.008	0.148	Volume
LTE Band 12				0.018	0.010	0.016	0.004	0.008	0.148	Volume
LTE Band 13				0.019	0.011	0.018	0.004	0.008	0.148	Volume
LTE Band 25(2)				0.023	0.009	0.015	0.004	0.008	0.148	Volume
LTE Band 26				0.014	0.008	0.014	0.004	0.008	0.148	Volume
LTE 41				0.023	0.011	0.017	0.004	0.008	0.148	Volume
LTE Band 66(4)				0.033	0.018	0.025	0.004	0.008	0.148	Volume

Band			$\Sigma$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Hybrid Volume
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
GSM 850	Bluetooth Ant2	5GHz MIMO	0.876	1.274	1.146	105.202	103.385	5.009	0.008	0.014	0.245	Volume
GMS1900			1.401	1.799	1.146	120.025	118.111	5.009	0.014	0.020	0.245	Volume
UMTS Band 5			0.892	1.290	1.146	78.199	76.448	5.009	0.011	0.019	0.245	Volume
UMTS Band 4			1.625	2.023	1.146	119.929	117.968	5.009	0.017	0.024	0.245	Volume
UMTS Band 2			1.503	1.901	1.146	121.426	119.462	5.009	0.015	0.022	0.245	Volume
LTE Band 12			1.057	1.455	1.146	106.566	104.690	5.009	0.010	0.017	0.245	Volume
LTE Band 13			1.116	1.514	1.146	105.071	103.200	5.009	0.011	0.018	0.245	Volume
LTE Band 25(2)			1.072	1.470	1.146	119.929	117.968	5.009	0.009	0.015	0.245	Volume
LTE Band 26			0.913	1.311	1.146	105.071	103.200	5.009	0.008	0.015	0.245	Volume
LTE 41			1.155	1.553	1.146	115.257	113.159	5.009	0.011	0.017	0.245	Volume
LTE Band 66(4)			1.673	1.990	1.146	109.451	107.514	5.009	0.020	0.026	0.245	Volume
GSM 850		6GHz MIMO	0.876	1.596	1.468	105.202	206.882	5.367	0.008	0.010	0.331	Volume
GMS1900			1.401	2.121	1.468	120.025	120.360	5.367	0.014	0.026	0.331	Volume
UMTS Band 5			0.892	1.612	1.468	78.199	75.596	5.367	0.011	0.027	0.331	Volume
UMTS Band 4			1.625	2.345	1.468	119.929	120.322	5.367	0.017	0.030	0.331	Volume
UMTS Band 2			1.503	2.223	1.468	121.426	121.822	5.367	0.015	0.027	0.331	Volume
LTE Band 12			1.057	1.777	1.468	106.566	106.868	5.367	0.010	0.022	0.331	Volume
LTE Band 13			1.116	1.836	1.468	105.071	105.369	5.367	0.011	0.024	0.331	Volume
LTE Band 25(2)			1.072	1.792	1.468	119.929	120.322	5.367	0.009	0.020	0.331	Volume
LTE Band 26			0.913	1.633	1.468	105.071	105.369	5.367	0.008	0.020	0.331	Volume
LTE 41			1.155	1.875	1.468	115.257	115.821	5.367	0.011	0.022	0.331	Volume
LTE Band 66(4)			1.673	2.312	1.468	109.451	109.824	5.367	0.020	0.032	0.331	Volume

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance					
				(W/kg)						(mm)					
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4
NR Band n5	LTE 66	Bluetooth Ant2 RSDB	5GHz MIMO RSDB	1.530	0.491	0.929	1.397	1.835	0.796	5.408	105.202	103.385	109.451	107.514	5.009
NR Band n5	LTE 25(2)			1.010	0.491	0.929	0.877	1.315	0.796	15.297	105.202	103.385	119.929	117.968	5.009
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.372	1.81	0.916	1.354	0.796	297.208	119.931	117.972	310.160	242.176	5.009
NR Band n66	LTE 26(5)			1.732	1.372	1.81	0.718	1.156	0.796	15.071	119.931	117.972	105.071	103.200	5.009
NR Band n66	LTE 12			1.876	1.372	1.81	0.862	1.300	0.796	13.579	119.931	117.972	106.566	104.690	5.009
NR Band n66	LTE 13			1.935	1.372	1.81	0.921	1.359	0.796	15.071	119.931	117.972	105.071	103.200	5.009
NR Band n5	LTE 66		6GHz MIMO RSDB	1.530	0.491	1.076	1.397	1.982	0.943	5.408	105.202	105.433	109.451	109.824	5.367
NR Band n5	LTE 25(2)			1.010	0.491	1.076	0.877	1.462	0.943	15.297	105.202	105.433	119.929	120.322	5.367
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.372	1.957	0.916	1.501	0.943	297.208	119.931	120.323	310.160	247.963	5.367
NR Band n66	LTE 26(5)			1.732	1.372	1.957	0.718	1.303	0.943	15.071	119.931	120.323	105.071	105.369	5.367
NR Band n66	LTE 12			1.876	1.372	1.957	0.862	1.447	0.943	13.579	119.931	120.323	106.566	106.868	5.367
NR Band n66	LTE 13			1.935	1.372	1.957	0.921	1.506	0.943	15.071	119.931	120.323	105.071	105.369	5.367

Band				SPLSR						Hybrid
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	Volume
NR Band n5	LTE 66	Bluetooth Ant2 RSDB	5GHz MIMO RSDB	0.350	0.003	0.009	0.015	0.023	0.142	Volume
NR Band n5	LTE 25(2)			0.066	0.003	0.009	0.007	0.013	0.142	Volume
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			0.009	0.013	0.021	0.003	0.007	0.142	Volume
NR Band n66	LTE 26(5)			0.151	0.013	0.021	0.006	0.012	0.142	Volume
NR Band n66	LTE 12			0.189	0.013	0.021	0.008	0.014	0.142	Volume
NR Band n66	LTE 13			0.179	0.013	0.021	0.008	0.015	0.142	Volume
NR Band n5	LTE 66		6GHz MIMO RSDB	0.350	0.003	0.011	0.015	0.025	0.171	Volume
NR Band n5	LTE 25(2)			0.066	0.003	0.011	0.007	0.015	0.171	Volume
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			0.009	0.013	0.023	0.003	0.007	0.171	Volume
NR Band n66	LTE 26(5)			0.151	0.013	0.023	0.006	0.014	0.171	Volume
NR Band n66	LTE 12			0.189	0.013	0.023	0.008	0.016	0.171	Volume
NR Band n66	LTE 13			0.179	0.013	0.023	0.008	0.018	0.171	Volume

Band					$\Sigma$ 1-g SAR									
					(W/kg)									
1	2	3	4	5	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	1.530	0.767	0.689	0.929	1.673	1.760	1.835	0.832	1.072	0.994
NR Band n5	LTE 25(2)				1.010	0.767	0.689	0.929	1.153	1.240	1.315	0.832	1.072	0.994
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)				1.930	1.648	1.570	1.81	1.192	1.279	1.354	0.832	1.072	0.994
NR Band n66	LTE 26(5)				1.732	1.648	1.570	1.81	0.994	1.081	1.156	0.832	1.072	0.994
NR Band n66	LTE 12				1.876	1.648	1.570	1.81	1.138	1.225	1.300	0.832	1.072	0.994
NR Band n66	LTE 13				1.935	1.648	1.570	1.81	1.197	1.284	1.359	0.832	1.072	0.994
NR Band n5	LTE 66			6GHz MIMO RSDB	1.530	0.767	0.689	1.076	1.673	1.760	1.982	0.832	1.219	1.141
NR Band n5	LTE 2				1.010	0.767	0.689	1.076	1.153	1.240	1.462	0.832	1.219	1.141
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)				1.930	1.648	1.570	1.957	1.192	1.279	1.501	0.832	1.219	1.141
NR Band n66	LTE 26(5)				1.732	1.648	1.570	1.957	0.994	1.081	1.303	0.832	1.219	1.141
NR Band n66	LTE 12	1.876	1.648		1.570	1.957	1.138	1.225	1.447	0.832	1.219	1.141		
NR Band n66	LTE 13	1.935	1.648		1.570	1.957	1.197	1.284	1.506	0.832	1.219	1.141		

Band					Peak SAR Separation Distance									
					(mm)									
1	2	3	4	5	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	5.408	70.129	105.368	103.385	65.302	109.505	107.514	173.888	171.889	2.000
NR Band n5	LTE 25(2)				15.297	70.129	105.368	103.385	54.898	119.960	117.968	173.888	171.889	2.000
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)				297.208	54.903	119.964	117.972	297.170	306.712	242.176	173.888	171.889	2.000
NR Band n66	LTE 26(5)				15.071	54.903	119.964	117.972	69.933	105.187	103.200	173.888	171.889	2.000
NR Band n66	LTE 12				13.579	54.903	119.964	117.972	68.447	106.677	104.690	173.888	171.889	2.000
NR Band n66	LTE 13				15.071	54.903	119.964	117.972	69.933	105.187	103.200	173.888	171.889	2.000
NR Band n5	LTE 66			6GHz MIMO RSDB	5.408	70.129	105.368	105.433	65.302	109.505	109.824	173.888	174.711	8.239
NR Band n5	LTE 2				15.297	70.129	105.368	105.433	54.898	119.960	120.322	173.888	174.711	8.239
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)				297.208	54.903	119.964	120.323	297.170	306.712	247.963	173.888	174.711	8.239
NR Band n66	LTE 26(5)				15.071	54.903	119.964	120.323	69.933	105.187	105.369	173.888	174.711	8.239
NR Band n66	LTE 12				13.579	54.903	119.964	120.323	68.447	106.677	106.868	173.888	174.711	8.239
NR Band n66	LTE 13				15.071	54.903	119.964	120.323	69.933	105.187	105.369	173.888	174.711	8.239

Band					SPLSR										Hybrid Volume	
1	2	2	3	4	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5		
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	0.350	0.010	0.005	0.009	0.033	0.021	0.023	0.004	0.006	0.496	Volume	
NR Band n5	LTE 2				0.066	0.010	0.005	0.009	0.023	0.012	0.013	0.004	0.006	0.496	Volume	
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)				0.009	0.039	0.016	0.021	0.004	0.005	0.007	0.004	0.006	0.496	Volume	
NR Band n66	LTE 5				0.151	0.039	0.016	0.021	0.014	0.011	0.012	0.004	0.006	0.496	Volume	
NR Band n66	LTE 12				0.189	0.039	0.016	0.021	0.018	0.013	0.014	0.004	0.006	0.496	Volume	
NR Band n66	LTE 13				0.179	0.039	0.016	0.021	0.019	0.014	0.015	0.004	0.006	0.496	Volume	
NR Band n5	LTE 66			6GHz MIMO RSDB		0.350	0.010	0.005	0.011	0.033	0.021	0.025	0.004	0.008	0.148	Volume
NR Band n5	LTE 2					0.066	0.010	0.005	0.011	0.023	0.012	0.015	0.004	0.008	0.148	Volume
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)					0.009	0.039	0.016	0.023	0.004	0.005	0.007	0.004	0.008	0.148	Volume
NR Band n66	LTE 5					0.151	0.039	0.016	0.023	0.014	0.011	0.014	0.004	0.008	0.148	Volume
NR Band n66	LTE 12					0.189	0.039	0.016	0.023	0.018	0.013	0.016	0.004	0.008	0.148	Volume
NR Band n66	LTE 13					0.179	0.039	0.016	0.023	0.019	0.014	0.018	0.004	0.008	0.148	Volume

**14.2.2.2 Top side**

Band			$\Sigma$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
UMTS Band 4	Bluetooth Ant1	5GHz MIMO	1.380	1.386	0.738	43.000	95.003	138.002	0.038	0.017	0.005	#50
UMTS Band 2			1.495	1.501	0.738	43.006	95.000	138.002	0.043	0.019	0.005	Volume
LTE Band 25(2)			1.480	1.486	0.738	43.006	95.000	138.002	0.042	0.019	0.005	Volume
LTE Band 66(4)		1.479	1.485	0.738	43.006	95.000	138.002	0.042	0.019	0.005	Volume	
LTE Band 25(2)		6GHz MIMO	1.480	1.235	0.487	43.006	96.003	139.000	0.042	0.014	0.002	Volume
LTE Band 66(4)			1.479	1.234	0.487	43.006	96.003	139.000	0.042	0.014	0.002	Volume

Band			$\Sigma$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
LTE Band 25(2)	Bluetooth Ant1	2.4GHz Ant2	1.480	1.283	0.535	43.006	126.000	139.002	0.042	0.012	0.003	Volume
LTE Band 66(4)			1.479	1.282	0.535	43.006	226.496	139.002	0.042	0.006	0.003	Volume
LTE Band 66(4)	2.4GHz MIMO		1.692			44.006			0.050			Volume

Band			$\sum$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Plot No.
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
LTE Band 25(2)	2.4GHz MIMO RSDB	5GHz MIMO RSDB	1.433	1.369	0.574	44.006	95.000	139.002	0.039	0.017	0.003	#51
LTE Band 66(4)			1.432	1.368	0.574	44.006	95.000	139.002	0.039	0.017	0.003	#52
LTE Band 66(4)		6GHz MIMO RSDB	1.432	1.178	0.384	44.006	96.010	140.002	0.039	0.013	0.002	#53

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance					
				(W/kg)						(mm)					
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4
LTE Band 25(2)	Bluetooth Ant1	2.4GHz ANT 2 RSDB	5GHz MIMO RSDB	1.364	1.225	1.369	0.361	0.505	0.366	43.006	126.000	95.000	169.001	138.002	31.000
LTE Band 66(4)			1.363	1.224	1.368	0.361	0.505	0.366	43.006	126.000	95.000	169.001	138.002	31.000	
LTE Band 66(4)			6GHz MIMO RSDB	1.363	1.224	1.178	0.361	0.315	0.176	43.006	126.000	96.010	169.001	139.002	30.033

Band				SPLSR						Hybrid Volume
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	
LTE Band 25(2)	Bluetooth Ant1	2.4GHz ANT 2 RSDB	5GHz MIMO RSDB	0.037	0.011	0.017	0.001	0.003	0.007	#54
LTE Band 66(4)			0.037	0.011	0.017	0.001	0.003	0.007	#55	
LTE Band 66(4)			6GHz MIMO RSDB	0.037	0.011	0.013	0.001	0.001	0.002	#56

Band			$\sum$ 1-g SAR			Peak SAR Separation Distance			SPLSR			Hybrid Volume
			(W/kg)			(mm)						
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
LTE Band 25(2)	Bluetooth Ant2	5GHz MIMO	1.236	1.486	0.494	126.000	95.000	31.000	0.011	0.019	0.011	#57
LTE Band 66(4)			1.363	1.485	0.494	126.000	95.000	31.000	0.013	0.019	0.011	#58

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance					
				(W/kg)						(mm)					
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4
NR Band n5	LTE 66	2.4GHz MIMO RSDB	5GHz MIMO RSDB	1.484	0.690	0.626	1.432	1.368	0.574	54.072	98.022	41.096	44.006	95.000	139.002
NR Band n5	LTE 25(2)			1.485	0.690	0.626	1.433	1.369	0.574	54.072	98.022	41.096	44.006	95.000	139.002
NR Band n66	LTE 5			1.301	0.899	0.835	1.040	0.976	0.574	54.072	44.139	95.093	98.002	41.024	139.002
NR Band n66	LTE 13			1.307	0.899	0.835	1.046	0.982	0.574	54.018	44.139	95.093	98.022	41.096	139.002
NR Band n5	LTE 66		6GHz MIMO RSDB	1.484	0.690	0.436	1.432	1.178	0.384	54.072	98.022	42.023	44.006	96.010	140.002
NR Band n5	LTE 25(2)			1.485	0.690	0.436	1.433	1.179	0.384	54.072	98.022	42.023	44.006	96.010	140.002
NR Band n66	LTE 5			1.301	0.899	0.645	1.040	0.786	0.384	54.072	44.139	96.041	98.002	42.000	140.002
NR Band n66	LTE 13			1.307	0.899	0.645	1.046	0.792	0.384	54.018	44.139	96.041	98.022	42.023	140.002

Band				SPLSR						Plot No.
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	
NR Band n5	LTE 66	2.4GHz MIMO RSDB	5GHz MIMO RSDB	0.033	0.006	0.012	0.039	0.017	0.003	#59
NR Band n5	LTE 25(2)			0.033	0.006	0.012	0.039	0.017	0.003	#60
NR Band n66	LTE 5			0.027	0.019	0.008	0.011	0.024	0.003	#61
NR Band n66	LTE 13			0.028	0.019	0.008	0.011	0.024	0.003	#62
NR Band n5	LTE 66		6GHz MIMO RSDB	0.033	0.006	0.007	0.039	0.013	0.002	#63
NR Band n5	LTE 25(2)			0.033	0.006	0.007	0.039	0.013	0.002	#64
NR Band n66	LTE 5			0.027	0.019	0.005	0.011	0.017	0.002	#65
NR Band n66	LTE 13			0.028	0.019	0.005	0.011	0.017	0.002	#66

Band					$\Sigma$ 1-g SAR									
					(W/kg)									
1	2	3	4	5	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	1.484	0.621	0.482	0.626	1.363	1.432	1.368	0.361	0.505	0.366
NR Band n5	LTE 25(2)				1.485	0.621	0.482	0.626	1.364	1.433	1.369	0.361	0.505	0.366
NR Band n66	LTE 5				1.301	0.830	0.691	0.835	0.971	1.040	0.976	0.361	0.505	0.366
NR Band n66	LTE 12				1.166	0.830	0.691	0.835	0.836	0.905	0.841	0.361	0.505	0.366
NR Band n66	LTE 13				1.307	0.830	0.691	0.835	0.977	1.046	0.982	0.361	0.505	0.366
NR Band n5	LTE 66			6GHz MIMO RSDB	1.484	0.621	0.482	0.436	1.363	1.432	1.178	0.361	0.315	0.176
NR Band n5	LTE 25(2)				1.485	0.621	0.482	0.436	1.364	1.433	1.179	0.361	0.315	0.176
NR Band n66	LTE 5				1.301	0.830	0.691	0.645	0.971	1.040	0.786	0.361	0.315	0.176
NR Band n66	LTE 12				1.166	0.830	0.691	0.645	0.836	0.905	0.651	0.361	0.315	0.176
NR Band n66	LTE 13				1.307	0.830	0.691	0.645	0.977	1.046	0.792	0.361	0.315	0.176

Band					Peak SAR Separation Distance									
					(mm)									
1	2	3	4	5	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	54.072	97.023	72.054	41.096	43.006	126.000	95.000	169.001	138.002	31.000
NR Band n5	LTE 25(2)				54.072	97.023	72.054	41.096	43.006	126.000	95.000	169.001	138.002	31.000
NR Band n66	LTE 5				54.072	43.142	126.070	95.093	97.002	72.014	41.024	169.001	138.002	31.000
NR Band n66	LTE 12				54.041	43.142	126.070	95.093	97.010	72.031	41.054	169.001	138.002	31.000
NR Band n66	LTE 13				54.018	43.142	126.070	95.093	97.023	72.054	41.096	169.001	138.002	31.000
NR Band n5	LTE 66			6GHz MIMO RSDB	54.072	97.023	72.054	42.023	43.006	126.000	96.010	169.001	139.002	30.033
NR Band n5	LTE 25(2)				54.072	97.023	72.054	42.023	43.006	126.000	96.010	169.001	139.002	30.033
NR Band n66	LTE 5				54.072	43.142	126.070	96.041	97.002	72.014	42.000	169.001	139.002	30.033
NR Band n66	LTE 12				54.041	43.142	126.070	96.041	97.010	72.031	42.006	169.001	139.002	30.033
NR Band n66	LTE 13				54.018	43.142	126.070	96.041	97.023	72.054	42.023	169.001	139.002	30.033

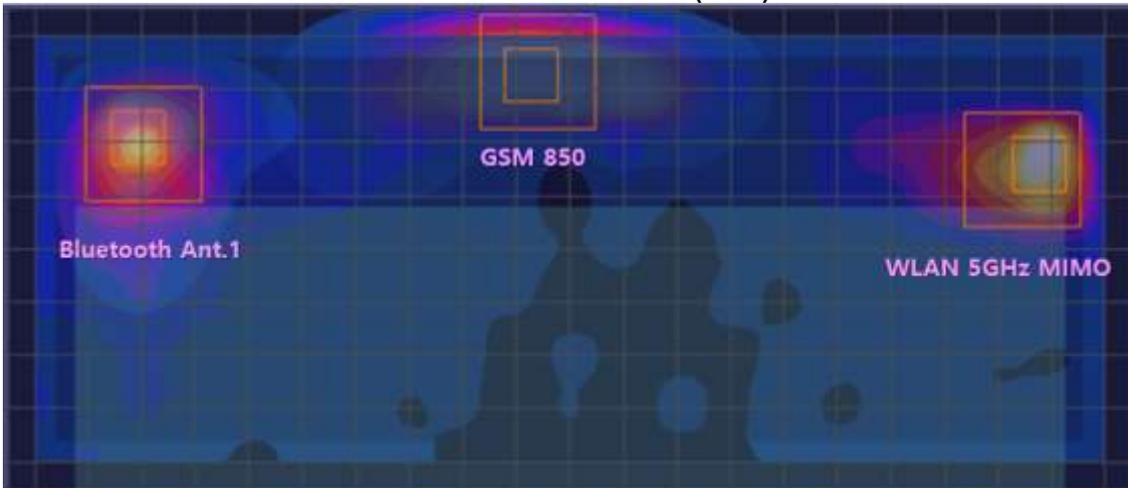
Band					SPLSR										Hybrid Volume
1	2	3	4	5	1+2	1+3	1+4	1+5	2+3	2+4	2+5	3+4	3+5	4+5	
NR Band n5	LTE 66	Bluetooth Ant1 RSDB	2.4GHz Ant2 RSDB	5GHz MIMO RSDB	0.033	0.005	0.005	0.012	0.037	0.014	0.017	0.001	0.003	0.007	#67
NR Band n5	LTE 2				0.033	0.005	0.005	0.012	0.037	0.014	0.017	0.001	0.003	0.007	#68
NR Band n66	LTE 5				0.027	0.018	0.005	0.008	0.010	0.015	0.024	0.001	0.003	0.007	#69
NR Band n66	LTE 12				0.023	0.018	0.005	0.008	0.008	0.012	0.019	0.001	0.003	0.007	#70
NR Band n66	LTE 13				0.028	0.018	0.005	0.008	0.010	0.015	0.024	0.001	0.003	0.007	#71
NR Band n5	LTE 66			6GHz MIMO RSDB	0.033	0.005	0.005	0.007	0.037	0.014	0.013	0.001	0.001	0.002	#72
NR Band n5	LTE 2				0.033	0.005	0.005	0.007	0.037	0.014	0.013	0.001	0.001	0.002	#73
NR Band n66	LTE 5				0.027	0.018	0.005	0.005	0.010	0.015	0.017	0.001	0.001	0.002	#74
NR Band n66	LTE 12				0.023	0.018	0.005	0.005	0.008	0.012	0.013	0.001	0.001	0.002	#75
NR Band n66	LTE 13				0.028	0.018	0.005	0.005	0.010	0.015	0.017	0.001	0.001	0.002	#76

Band				$\sum$ 1-g SAR						Peak SAR Separation Distance					
				(W/kg)						(mm)					
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	1+2	1+3	1+4	2+3	2+4	3+4
NR Band n5	LTE 66	Bluetooth Ant2 RSDB	5GHz MIMO RSDB	1.484	0.430	0.626	1.172	1.368	0.314	54.072	72.054	41.096	126.000	95.000	31.000
NR Band n5	LTE 2			1.485	0.430	0.626	1.173	1.369	0.314	54.072	72.054	41.096	126.000	95.000	31.000
NR Band n66	LTE 5			1.301	0.639	0.835	0.780	0.976	0.314	54.072	126.070	95.093	72.014	41.024	31.000
NR Band n66	LTE 13			1.307	0.639	0.835	0.786	0.982	0.314	54.018	126.070	95.093	72.054	41.096	31.000
NR Band n5	LTE 66		6GHz MIMO RSDB	1.484	0.430	0.436	1.172	1.178	0.124	54.072	72.054	42.023	126.000	96.010	30.033
NR Band n5	LTE 25(2)			1.485	0.430	0.436	1.173	1.179	0.124	54.072	72.054	42.023	126.000	96.010	30.033

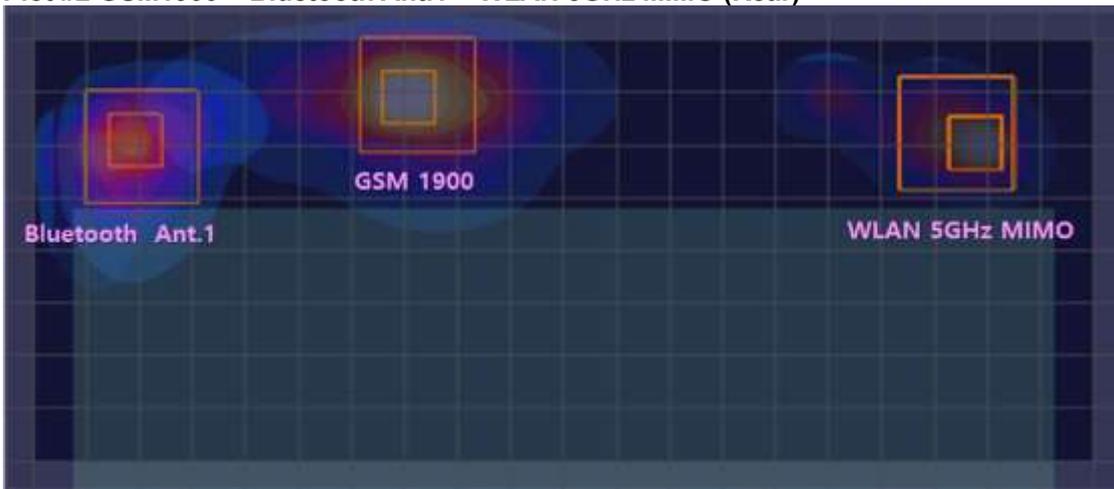
Band				SPLSR						Hybrid Volume
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	
NR Band n5	LTE 66	Bluetooth Ant2 RSDB	5GHz MIMO RSDB	0.033	0.004	0.012	0.010	0.017	0.006	#77
NR Band n5	LTE 2			0.033	0.004	0.012	0.010	0.017	0.006	#78
NR Band n66	LTE 5			0.027	0.004	0.008	0.010	0.024	0.006	#79
NR Band n66	LTE 13			0.028	0.004	0.008	0.010	0.024	0.006	#80
NR Band n5	LTE 66		6GHz MIMO RSDB	0.033	0.004	0.007	0.010	0.013	0.001	#81
NR Band n5	LTE 25(2)			0.033	0.004	0.007	0.010	0.013	0.001	#82

14.2.3 SPLSR Plot

Plot #1 GSM850 + Bluetooth Ant.1 + WLAN 5GHz MIMO(Rear)



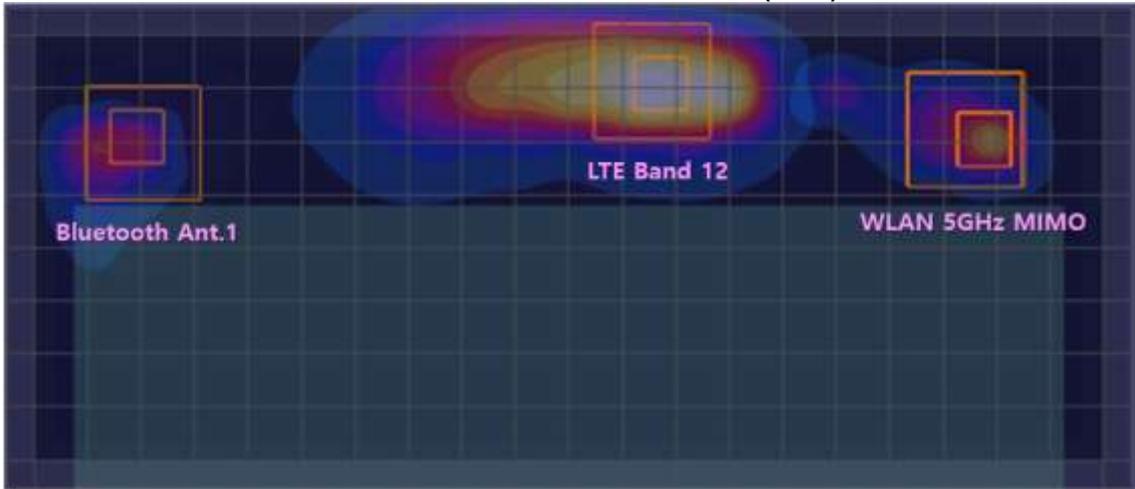
Plot #2 GSM1900 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)



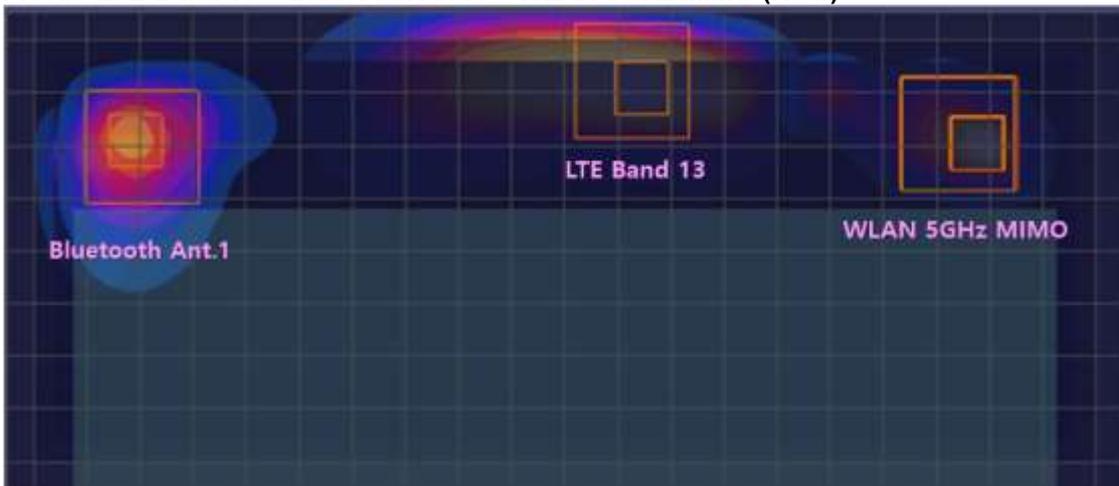
Plot #3 UMTS Band 5 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)



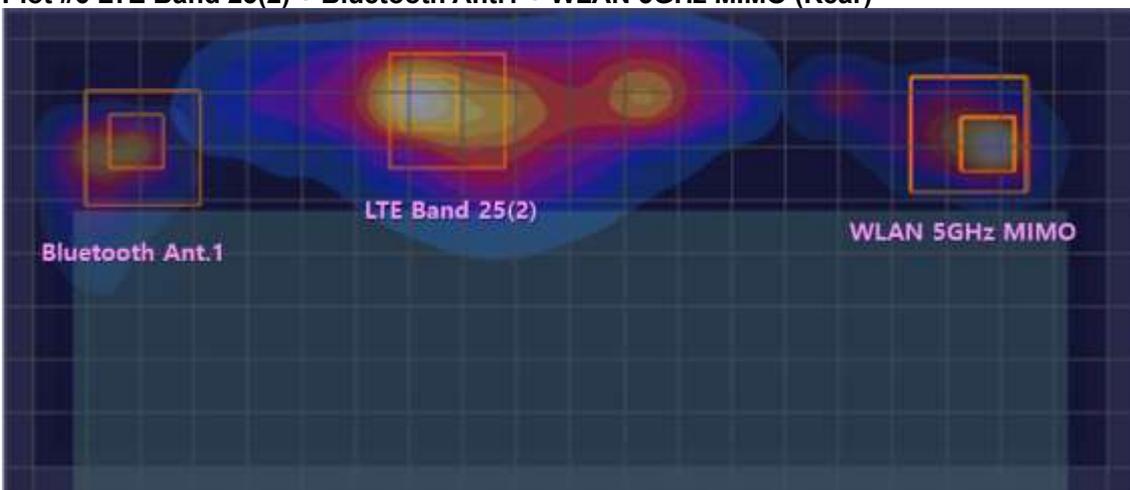
**Plot #4 LTE Band 12 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



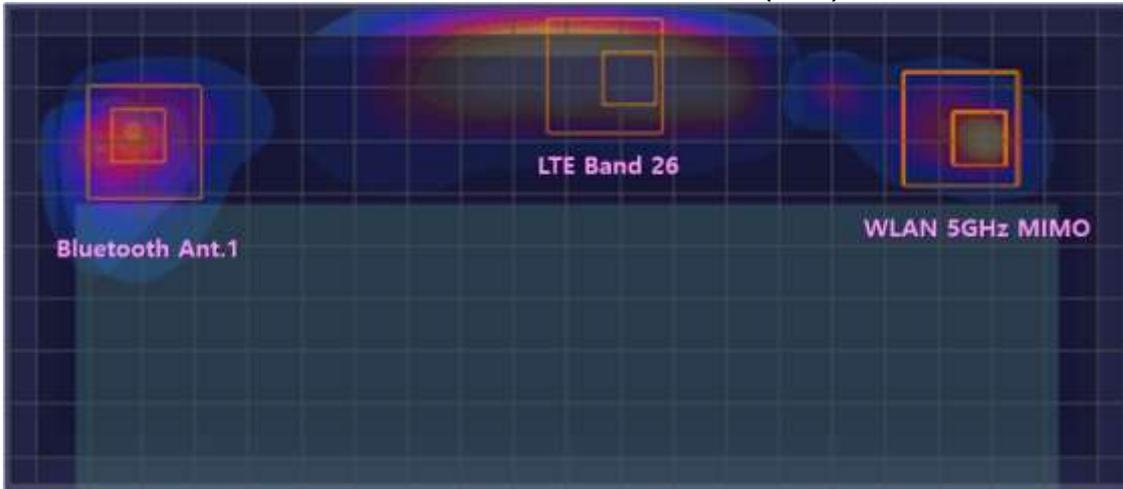
**Plot #5 LTE Band 13 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



**Plot #6 LTE Band 25(2) + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



**Plot #7 LTE Band 26 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



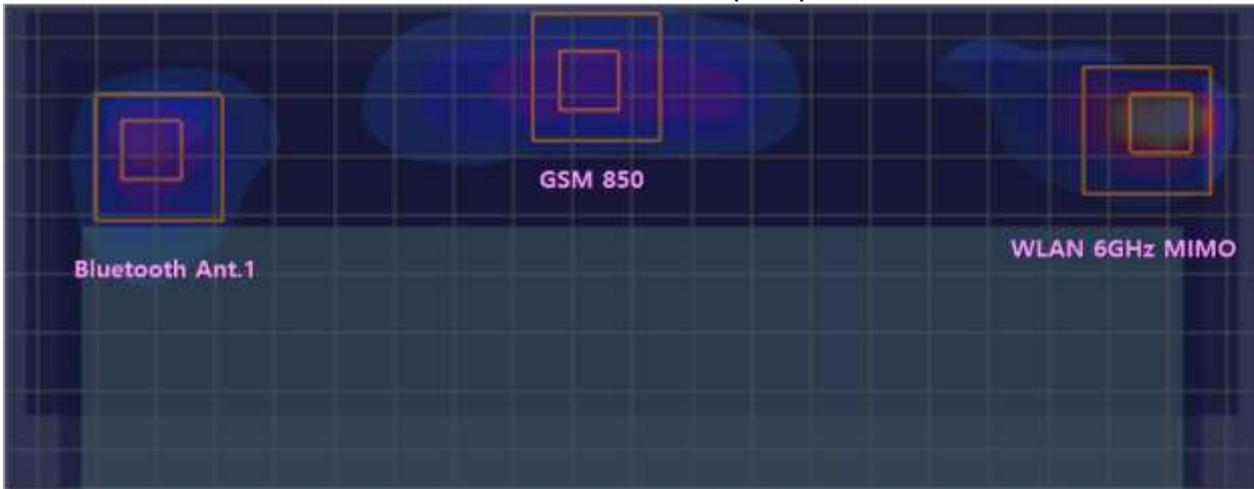
**Plot #8 LTE Band 41 + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



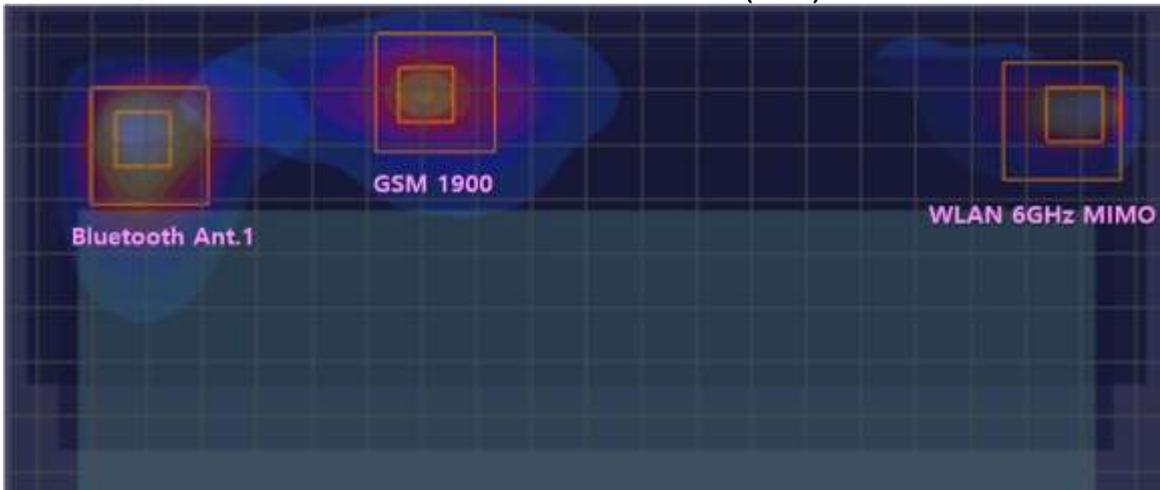
**Plot #9 LTE Band 66(4) + Bluetooth Ant.1 + WLAN 5GHz MIMO (Rear)**



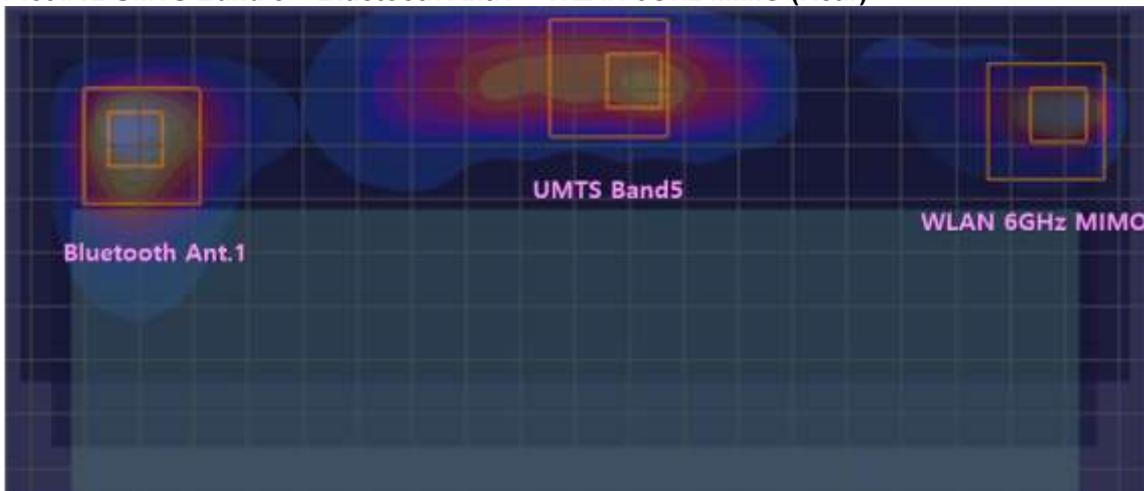
**Plot #10 GSM 850 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



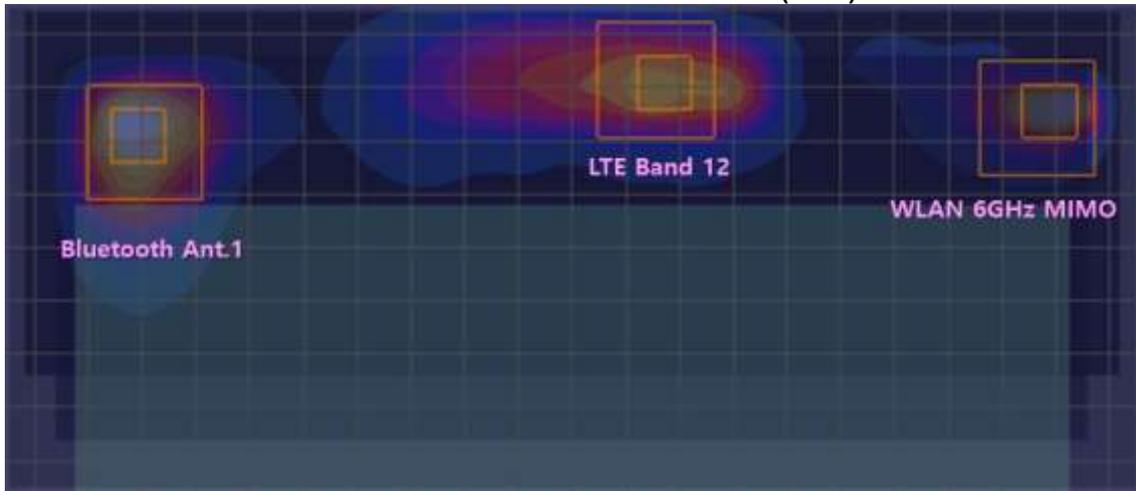
**Plot #11 GSM 1900 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



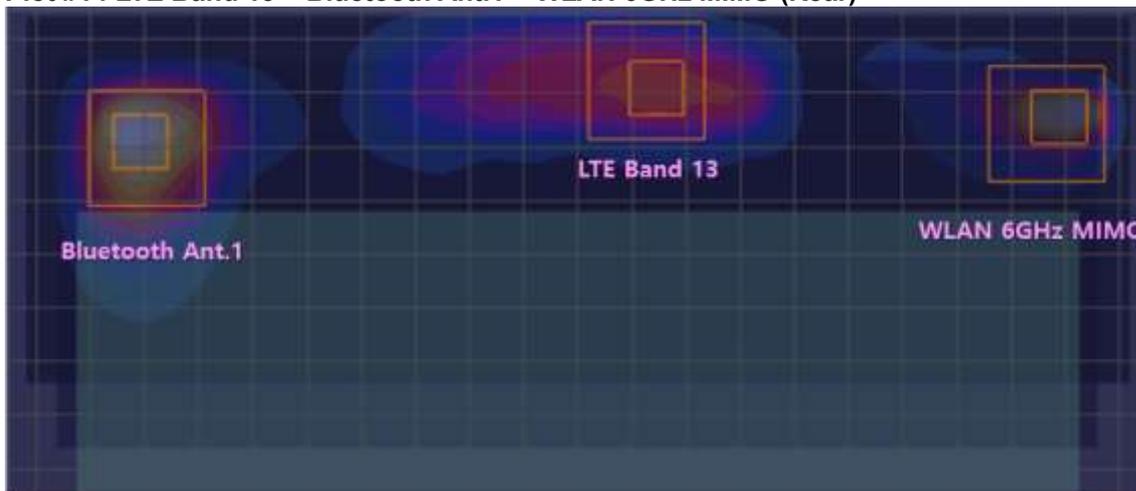
**Plot #12 UMTS Band 5 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



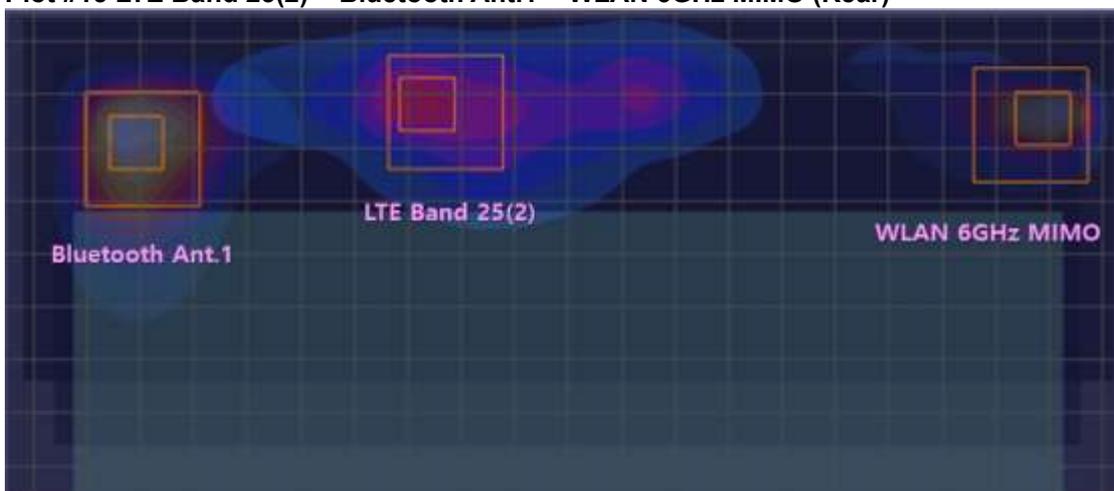
**Plot #13 LTE Band 12 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



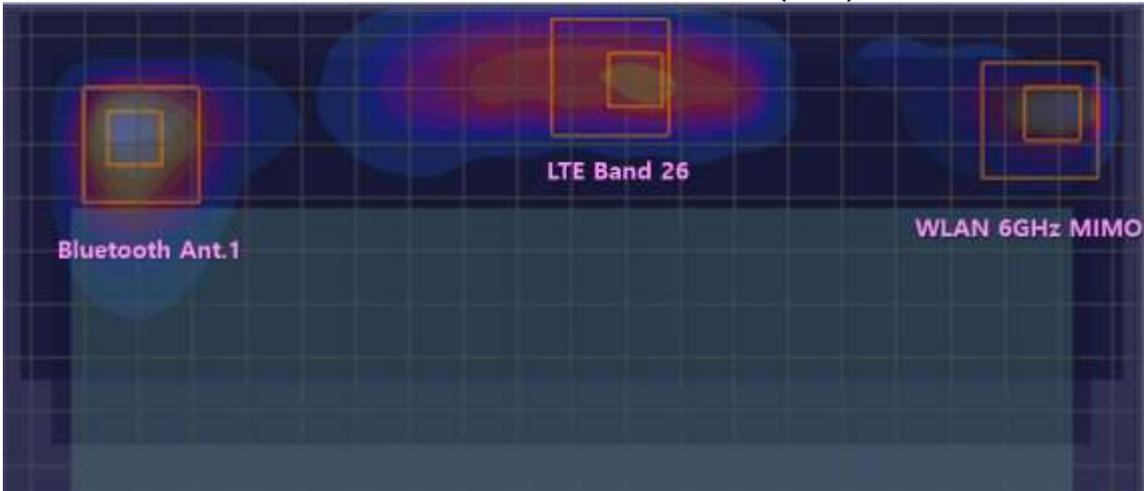
**Plot #14 LTE Band 13 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



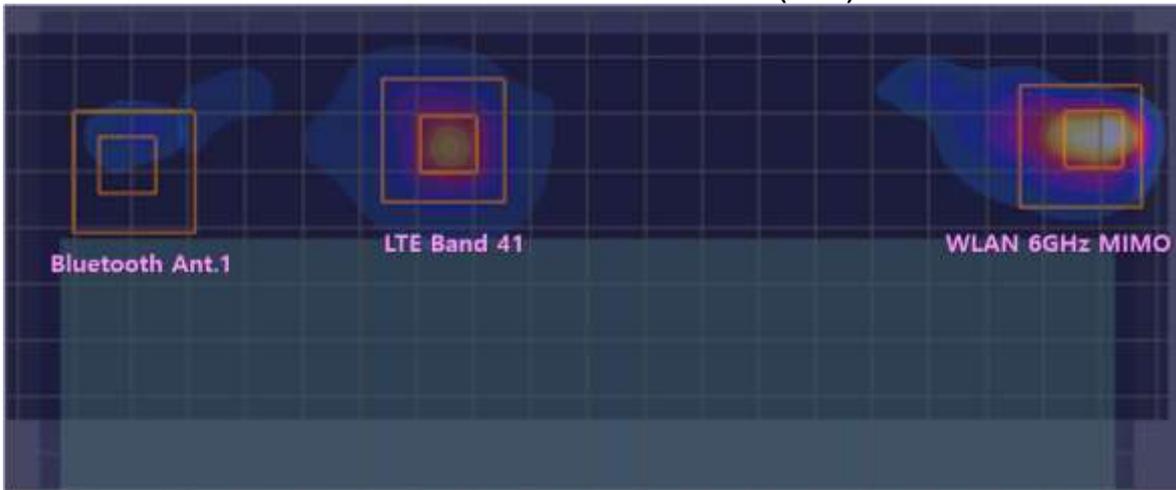
**Plot #15 LTE Band 25(2) + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



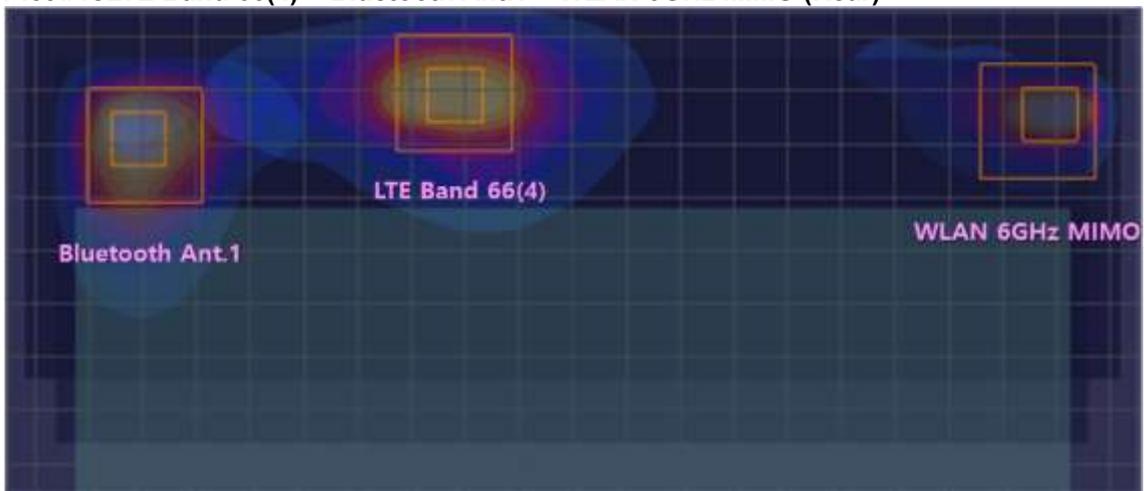
**Plot #16 LTE Band 26 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



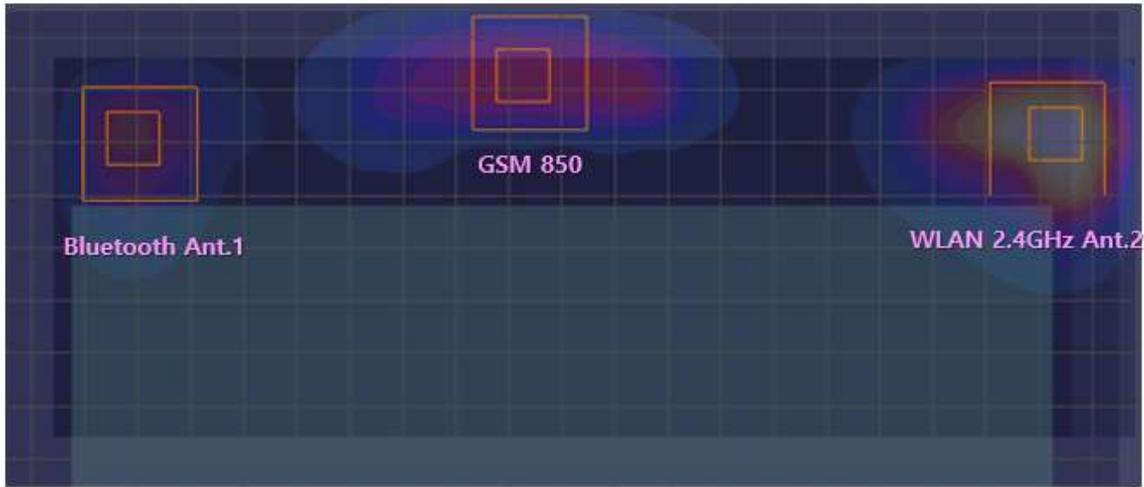
**Plot #17 LTE Band 41 + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



**Plot #18 LTE Band 66(4) + Bluetooth Ant.1 + WLAN 6GHz MIMO (Rear)**



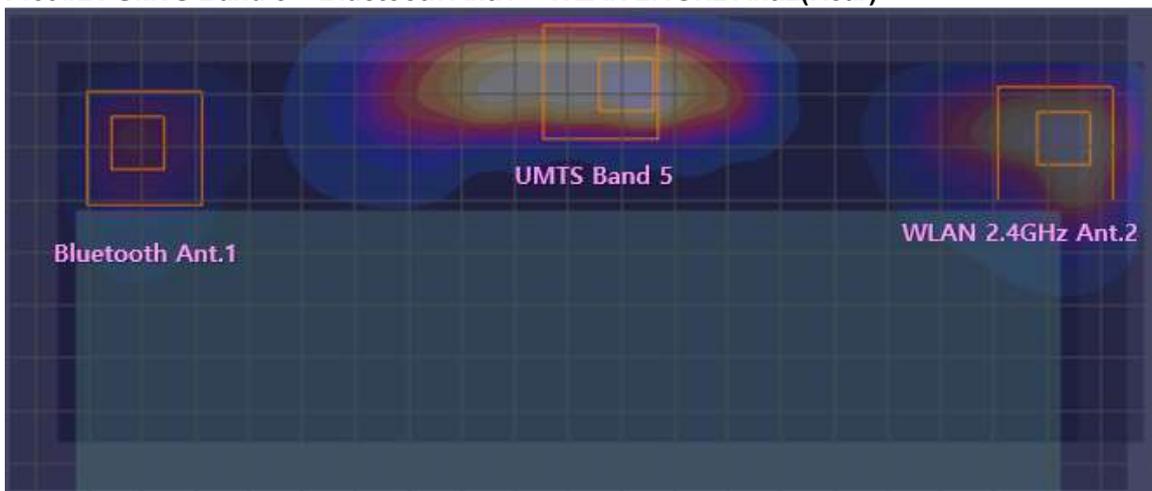
**Plot #19 GSM 850 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



**Plot #20 GSM 1900 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



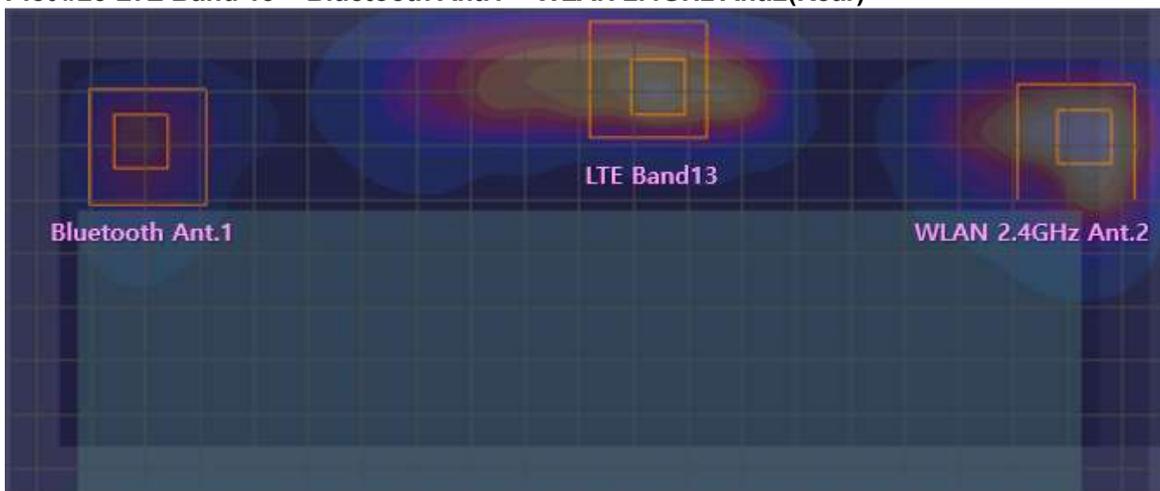
**Plot #21 UMTS Band 5 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



**Plot #22 LTE Band 12 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



**Plot #23 LTE Band 13 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



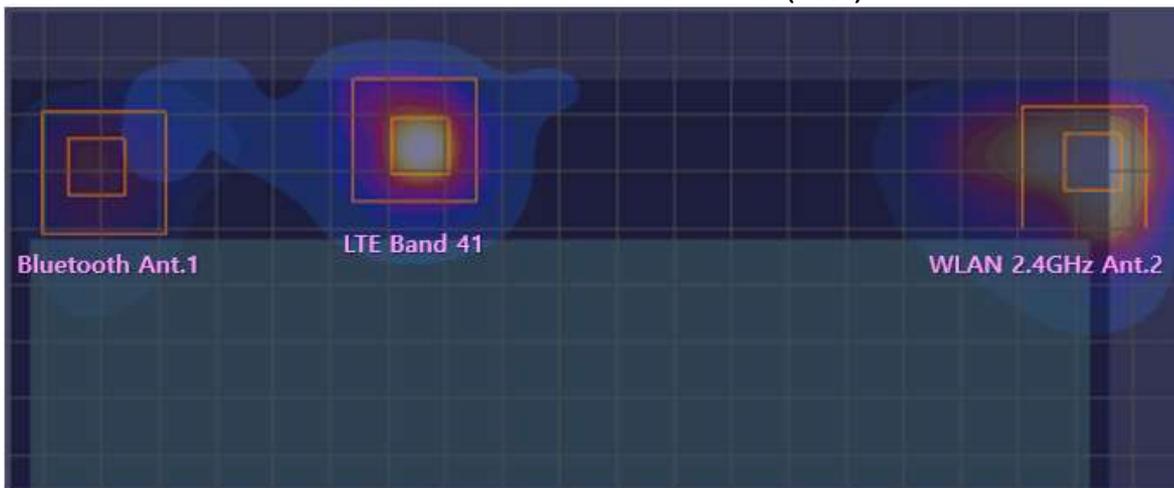
**Plot #24 LTE Band 25(2) + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



**Plot #25 LTE Band 26 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



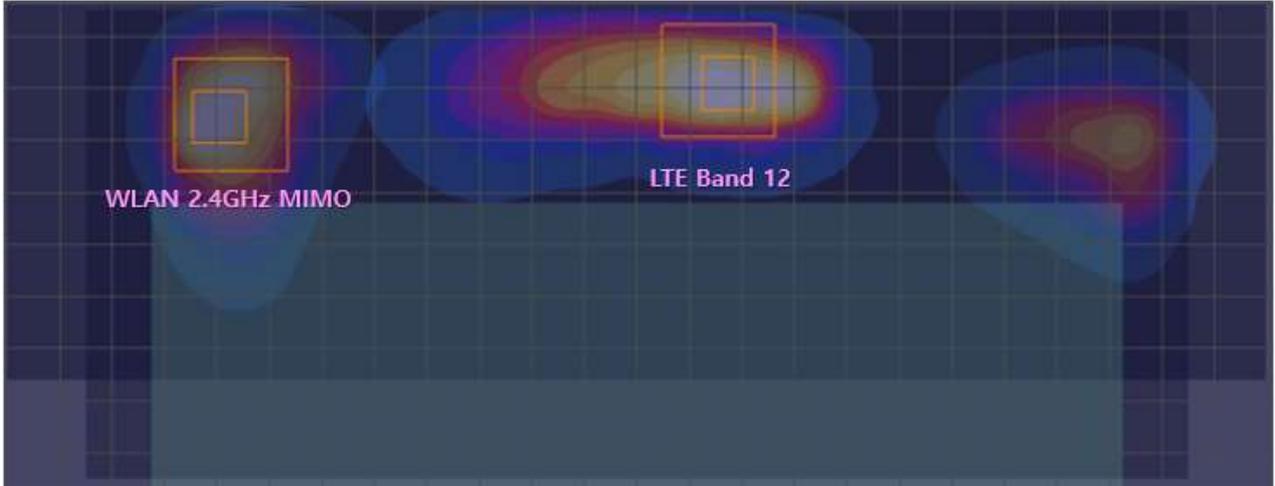
**Plot #26 LTE Band 41 + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



**Plot #27 LTE Band 66(4) + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2(Rear)**



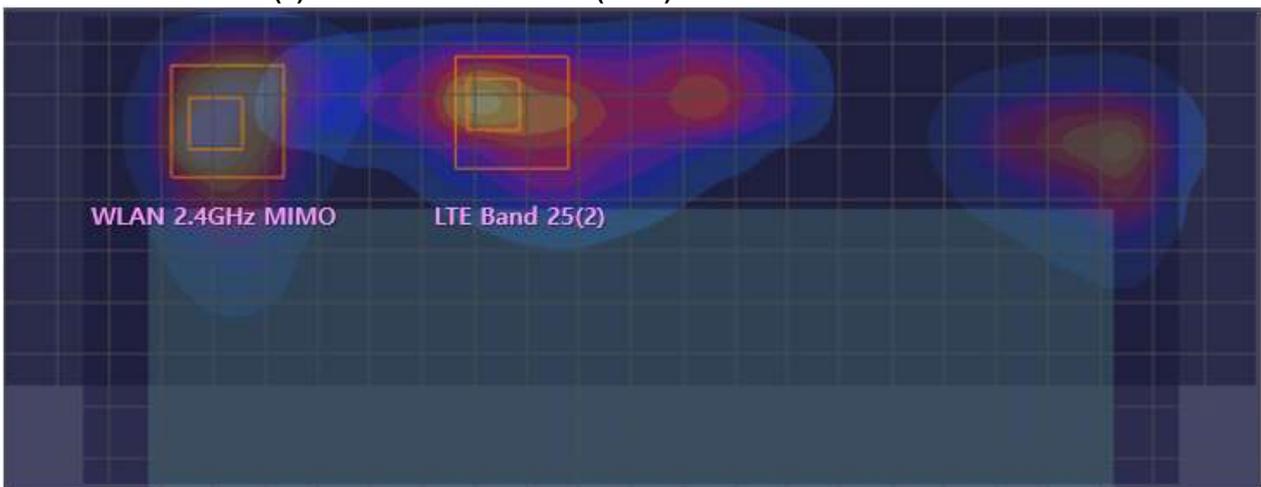
**Plot #28 LTE Band 12 + WLAN 2.4GHz MIMO(Rear)**



**Plot #29 LTE Band 13 + WLAN 2.4GHz MIMO(Rear)**



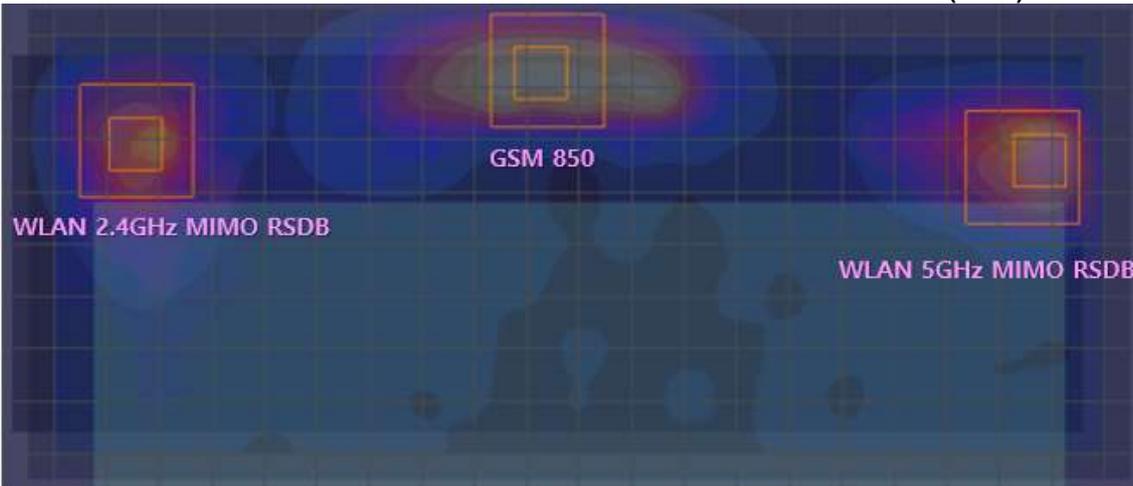
**Plot #30 LTE Band 25(2) + WLAN 2.4GHz MIMO(Rear)**



**Plot #31 LTE Band 41 + WLAN 2.4GHz MIMO(Rear)**



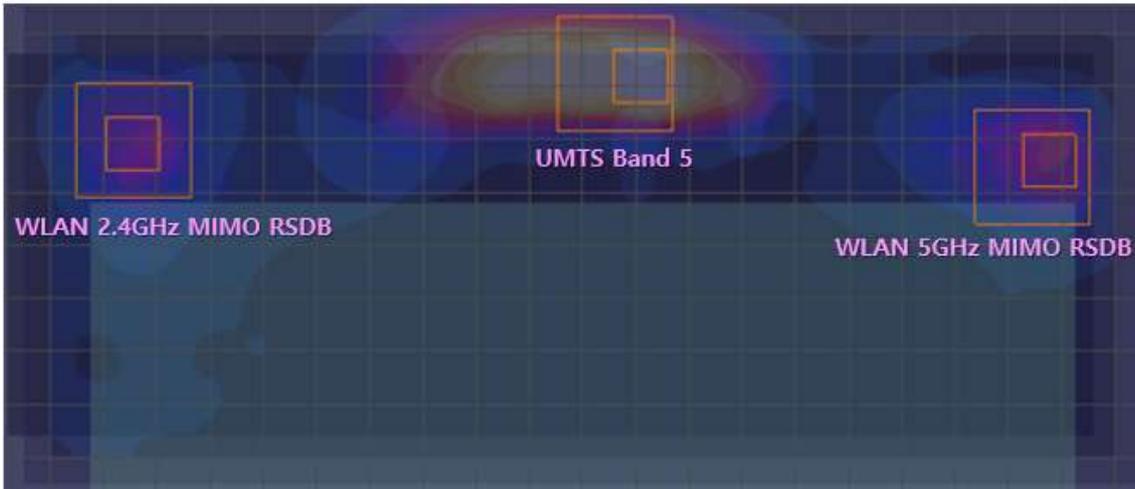
**Plot #32 GSM 850 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)**



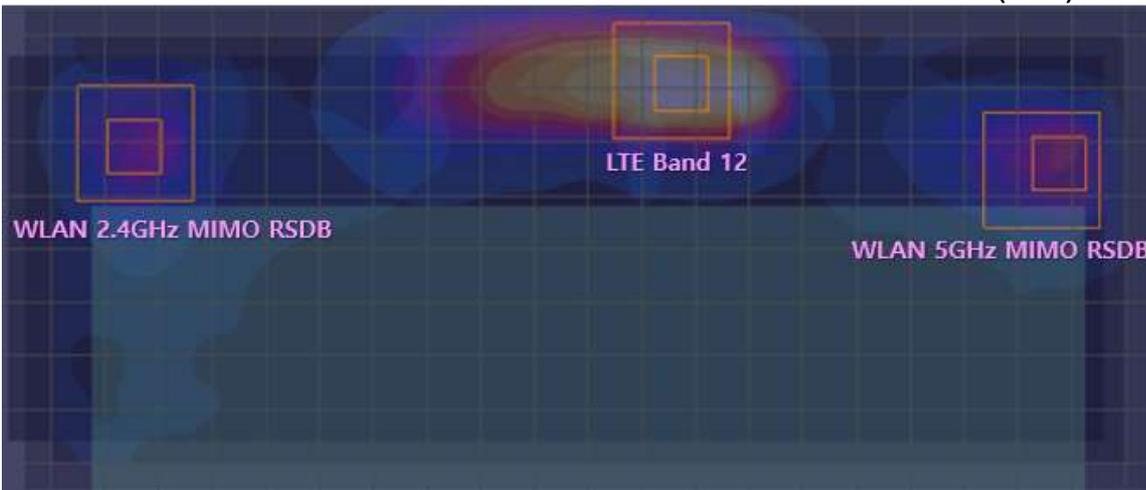
**Plot #33 GSM 1900 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)**



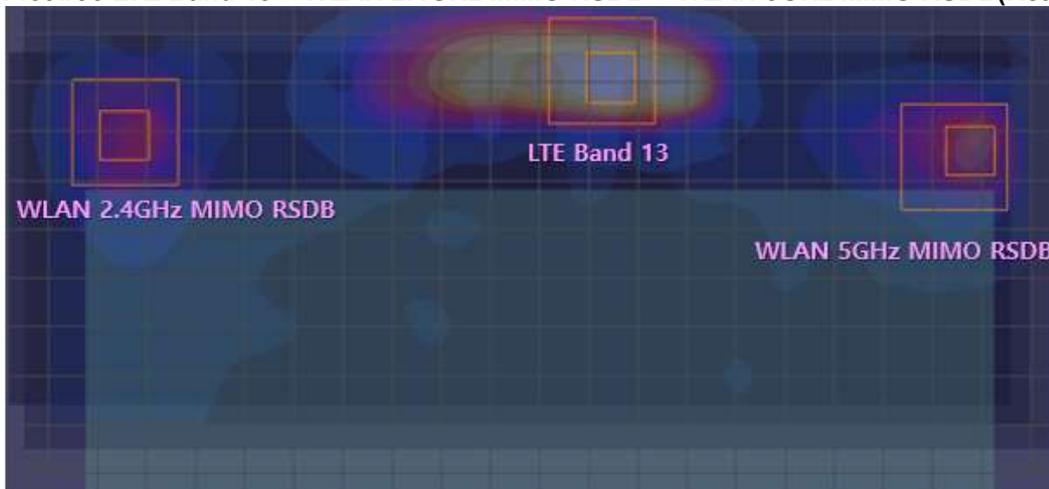
**Plot #34 UMTS Band 5 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)**



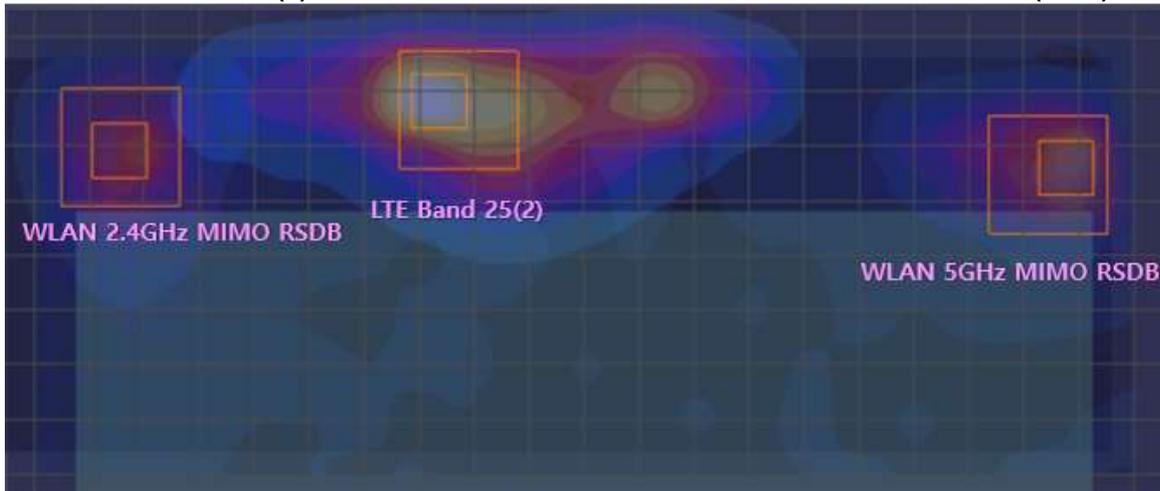
**Plot #35 LTE Band 12 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)**



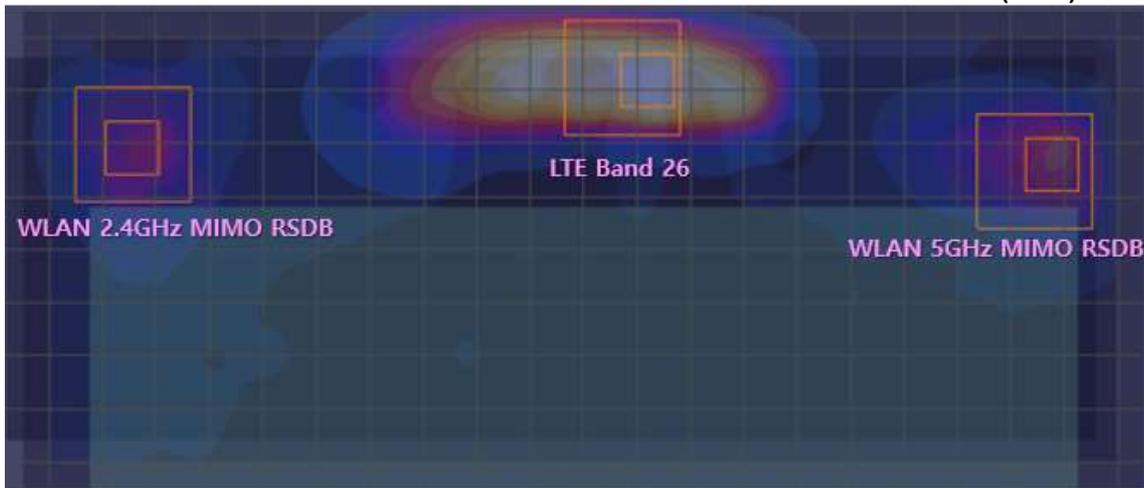
**Plot #36 LTE Band 13 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)**



Plot #37 LTE Band 25(2) + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)



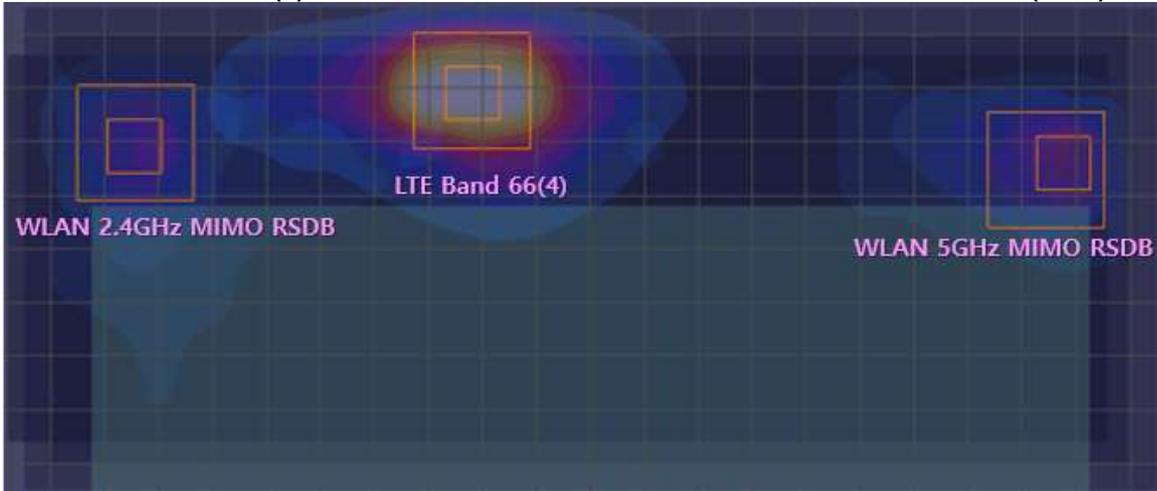
Plot #38 LTE Band 26 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)



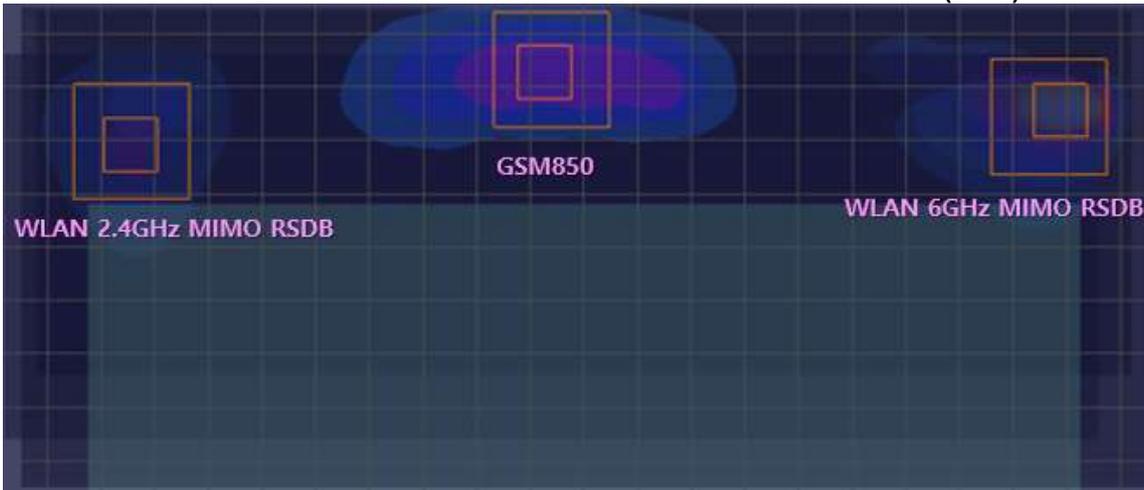
Plot #39 LTE Band 41 + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)



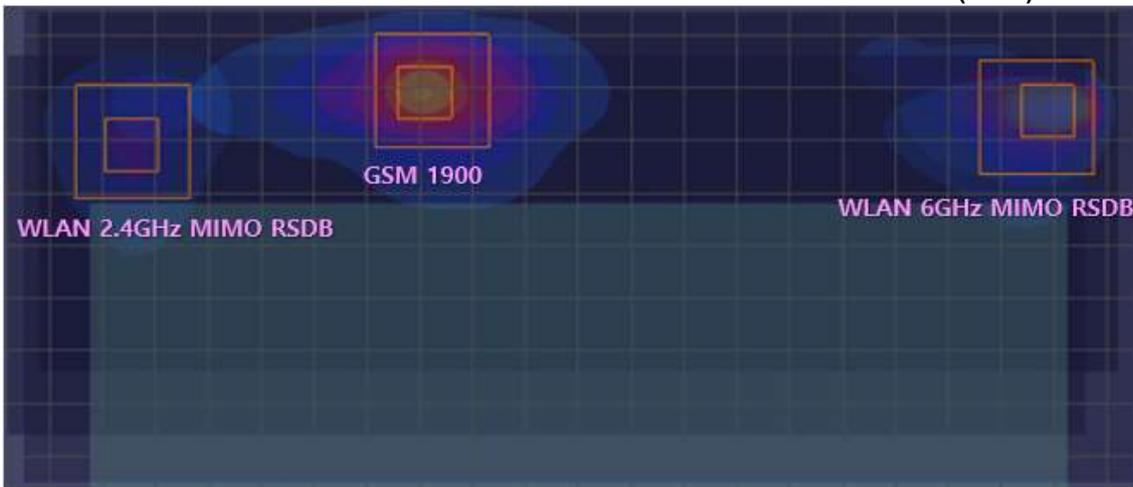
Plot #40 LTE Band 66(4) + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMO RSDB(Rear)



Plot #41 GSM850 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



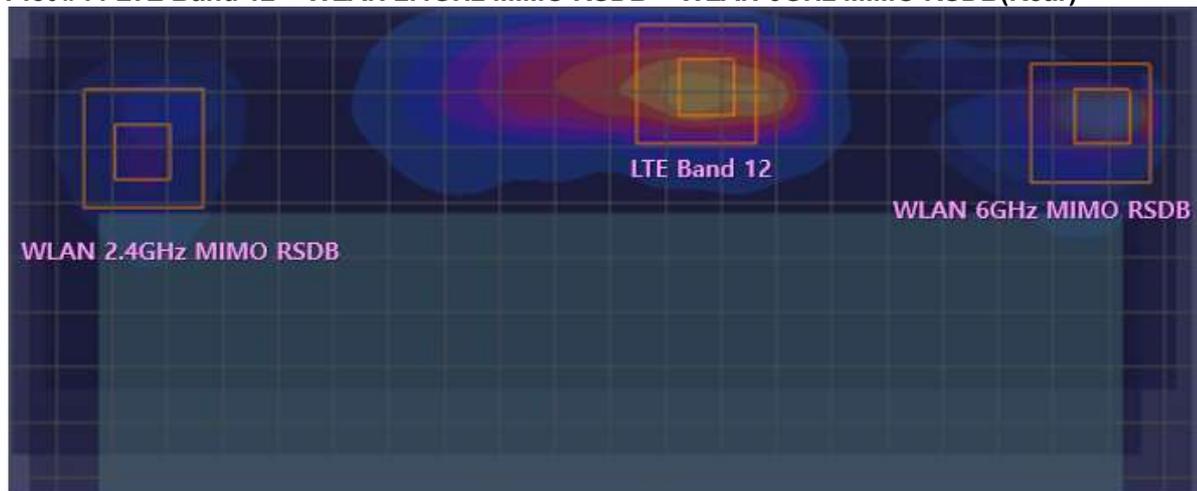
Plot #42 GSM1900 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



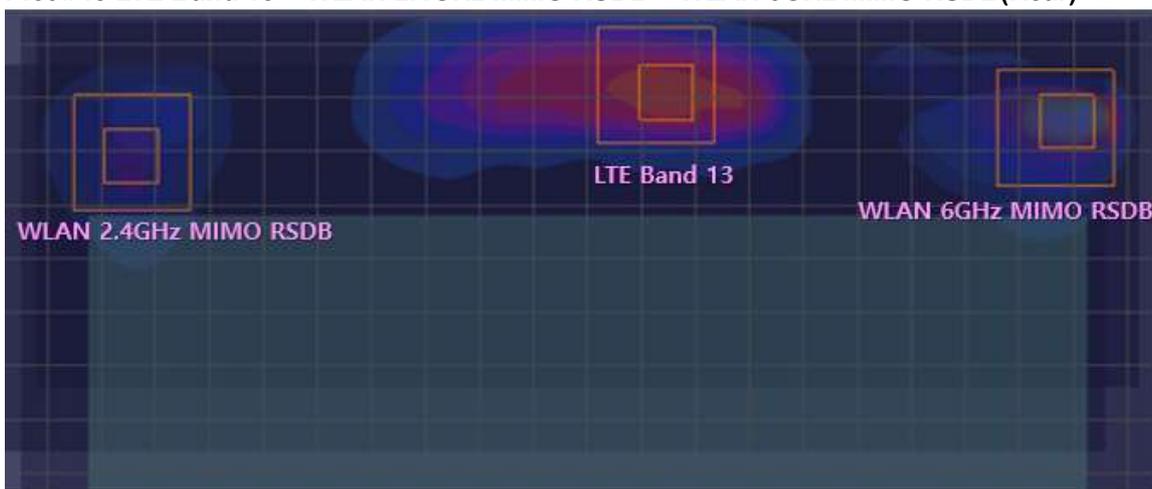
Plot #43 UMTS Band 5 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



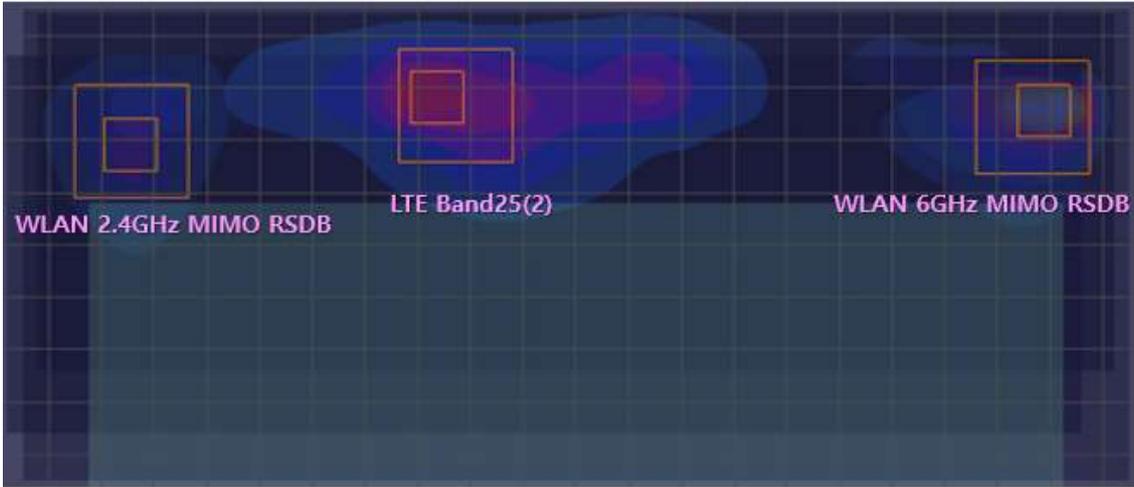
Plot #44 LTE Band 12 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



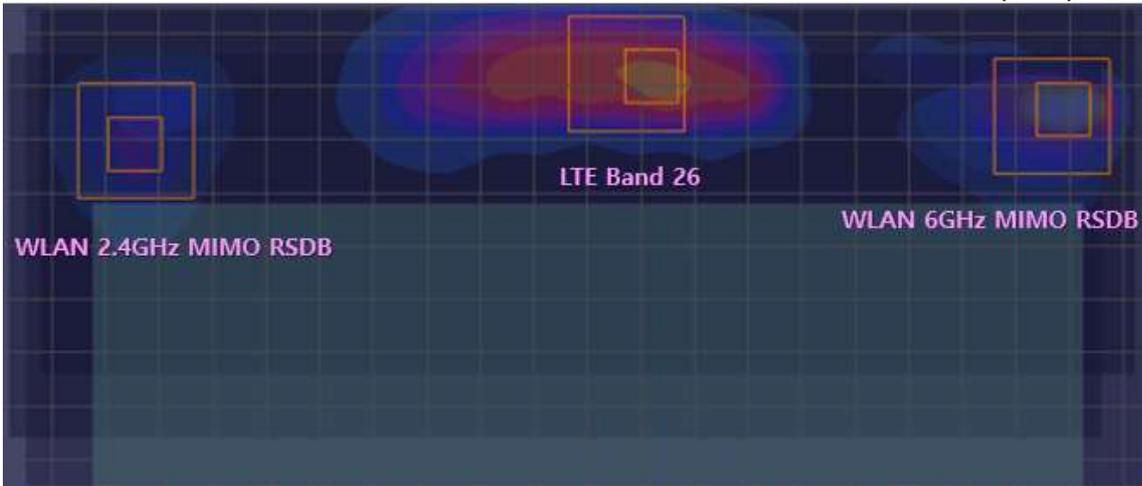
Plot #45 LTE Band 13 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



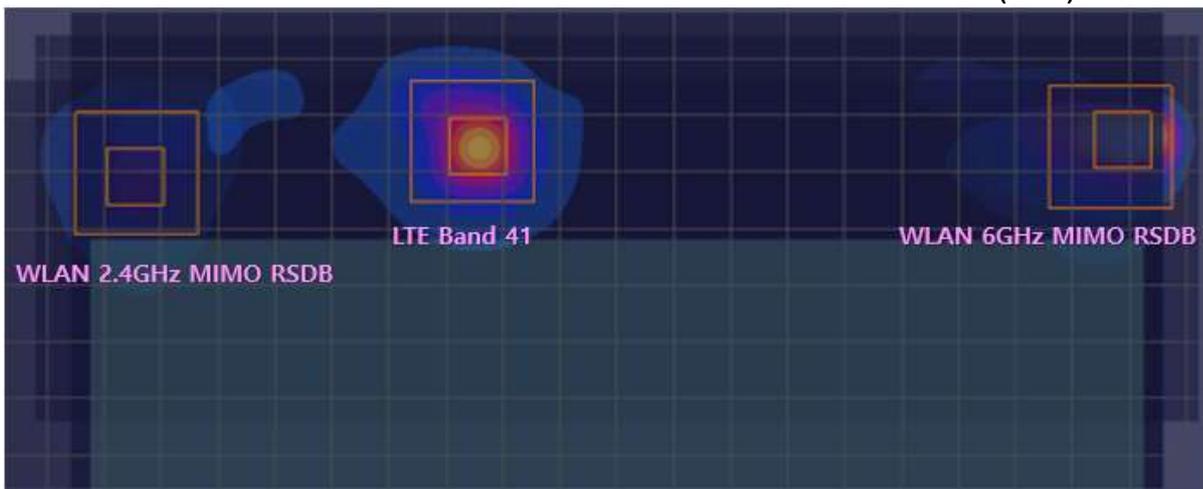
Plot #46 LTE Band 25(2) + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



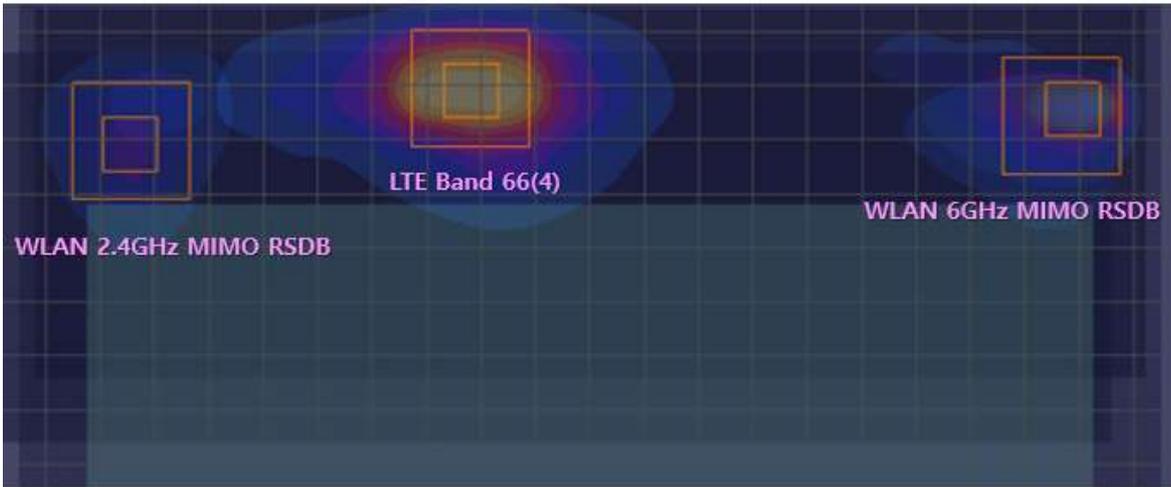
Plot #47 LTE Band 26 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



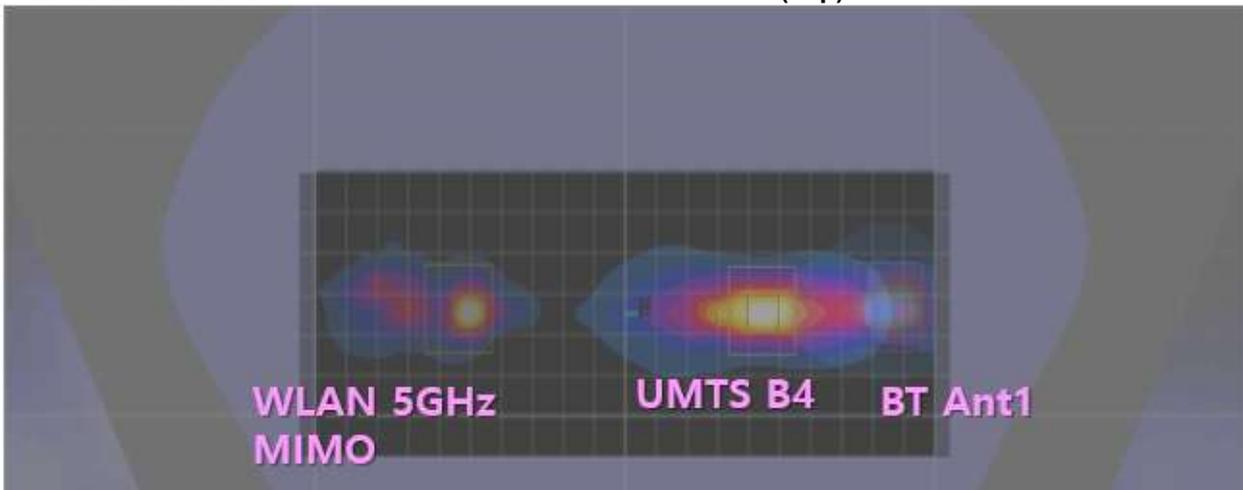
Plot #48 LTE Band 41 + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



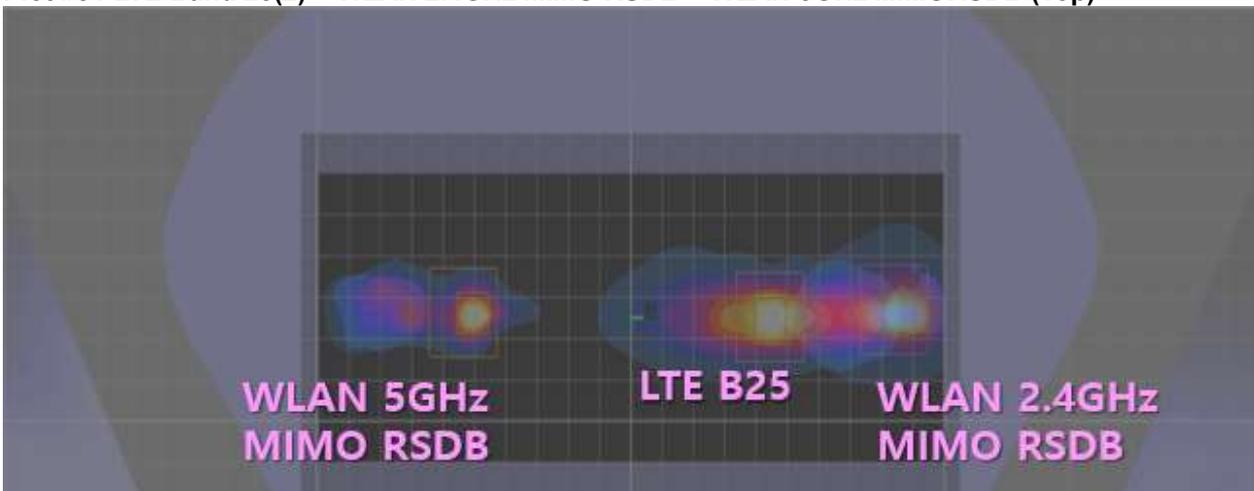
Plot #49 LTE Band 66(4) + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMO RSDB(Rear)



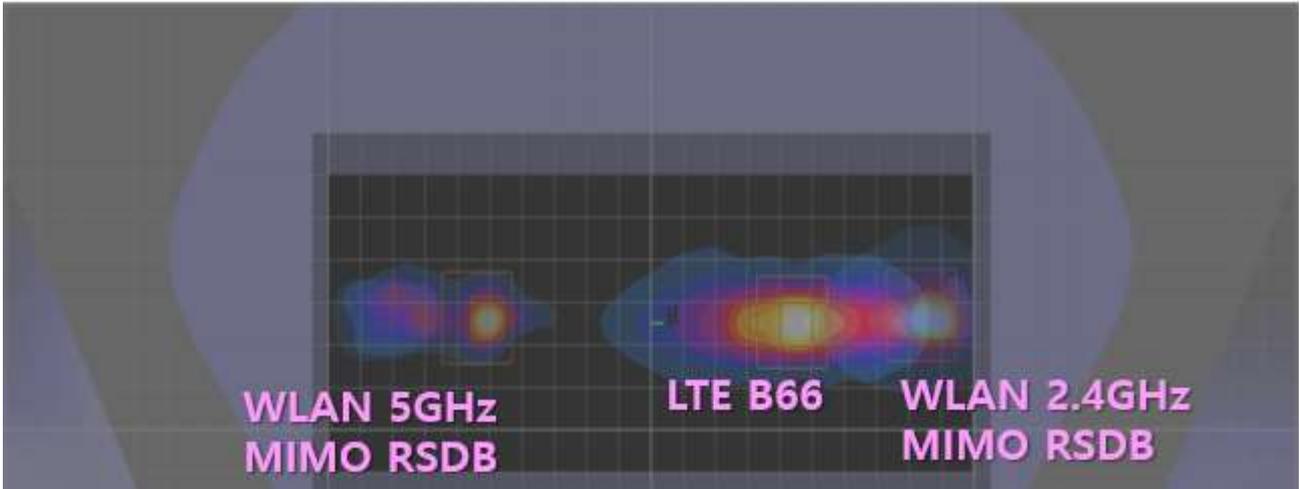
Plot #50 UMTS Band 4 + Bluetooth Ant.1 + WLAN 5GHz MIMO(Top)



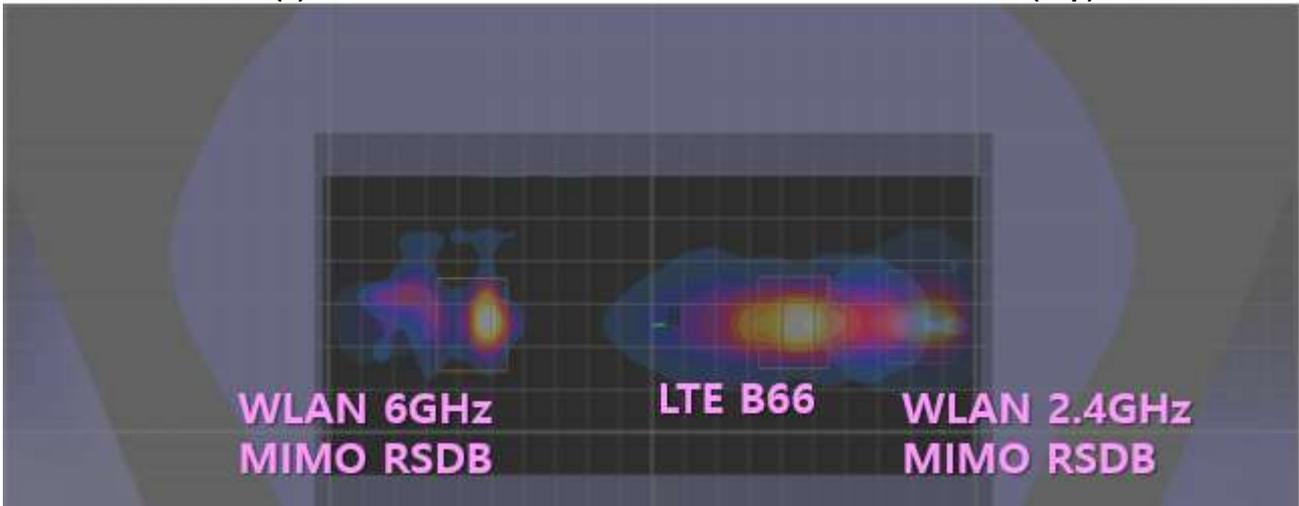
Plot #51 LTE Band 25(2) + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)



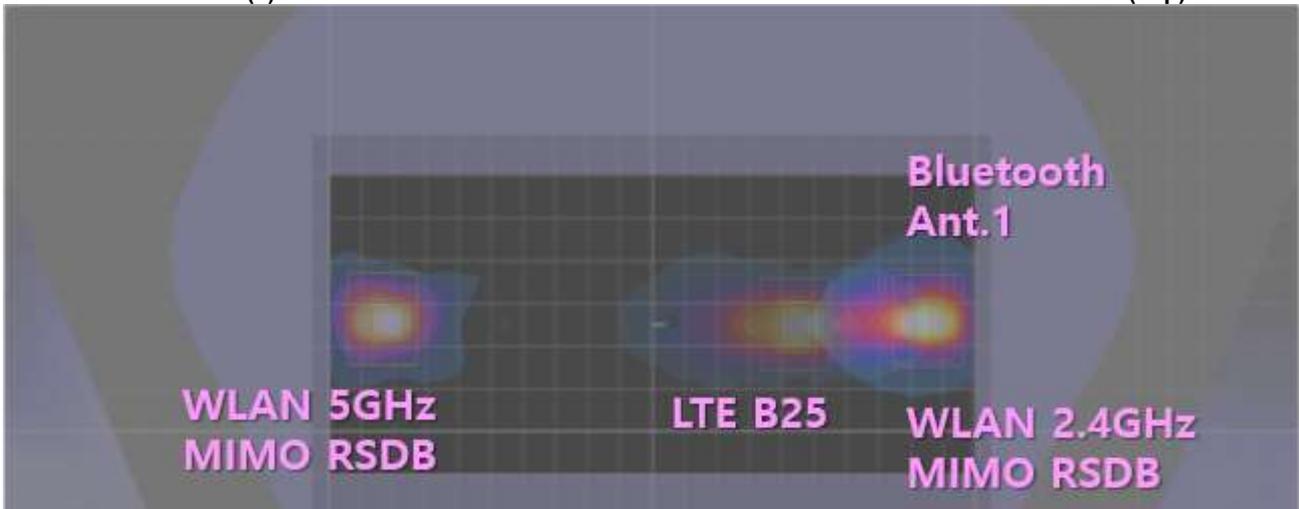
**Plot #52 LTE Band 66(4) + WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)**



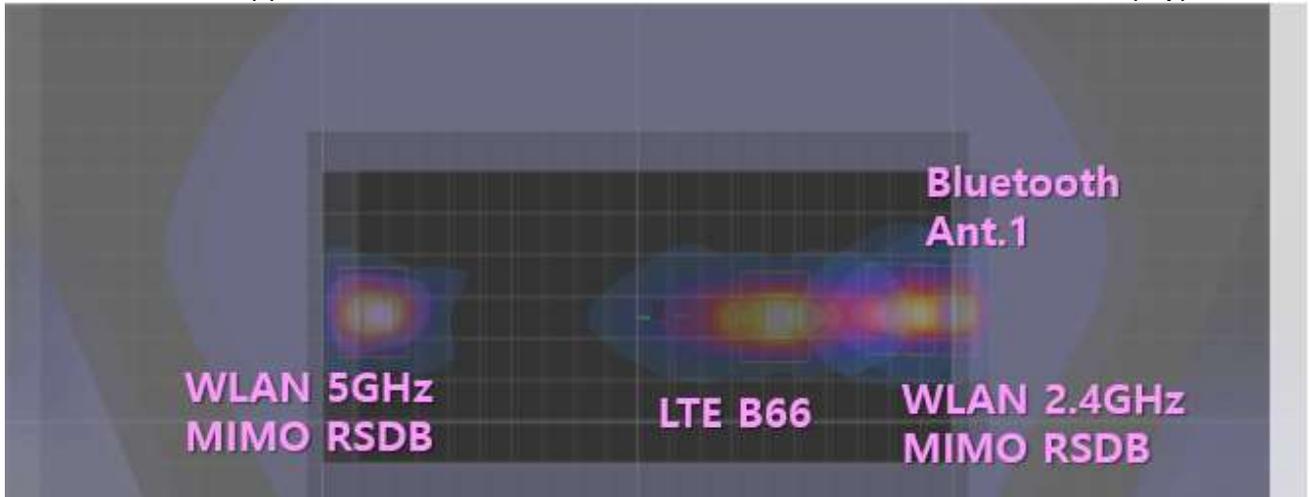
**Plot #53 LTE Band 66(4) + WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMORSDB (Top)**



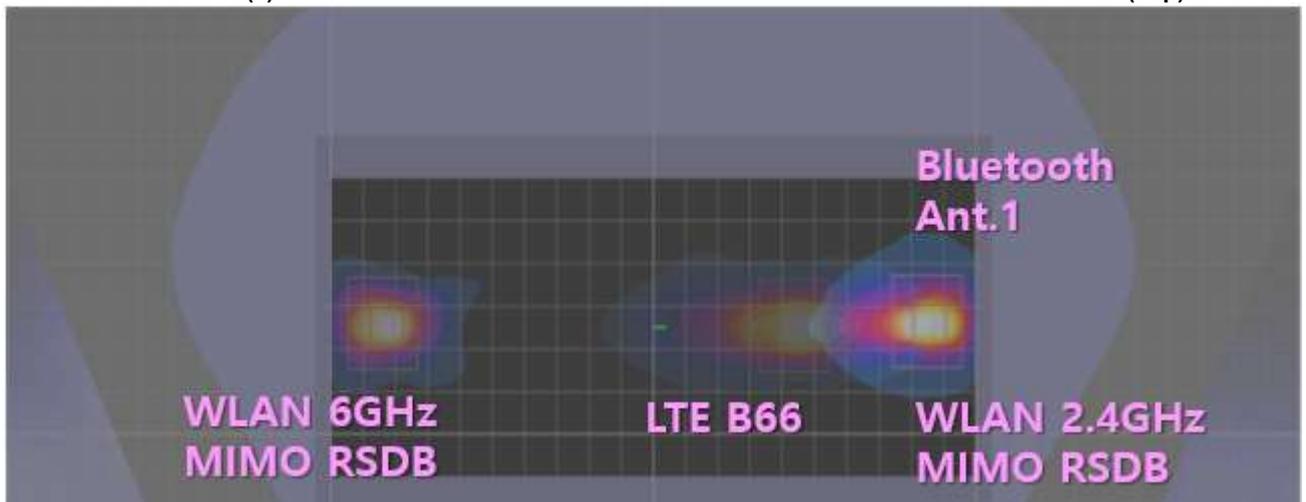
**Plot #54 LTE Band 25(2) + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)**



Plot #55 LTE Band 66(4) + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



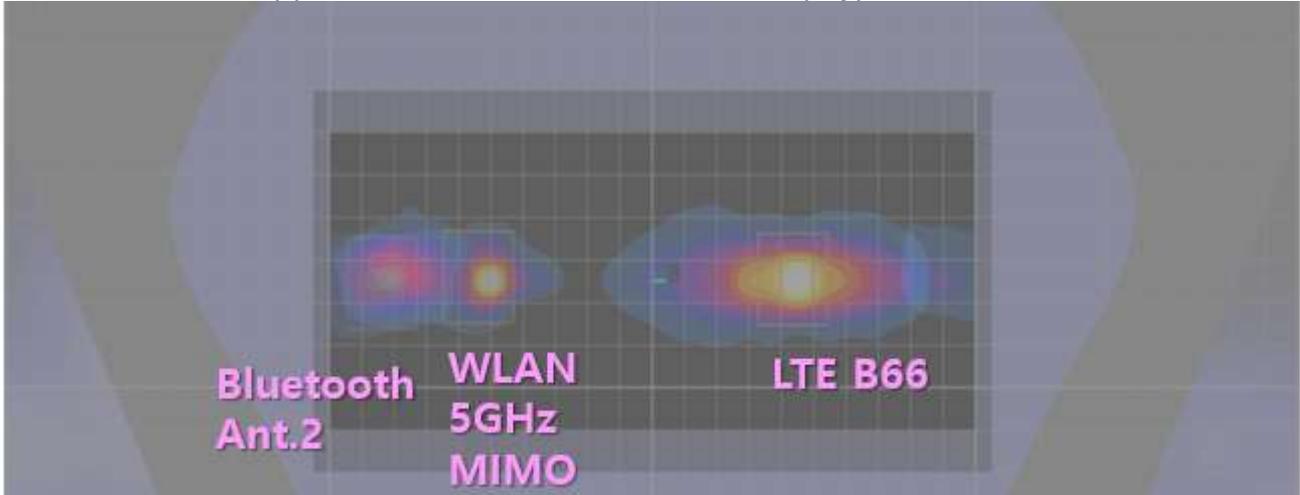
Plot #56 LTE Band 66(4) + Bluetooth Ant.1 + WLAN 2.4GHz Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



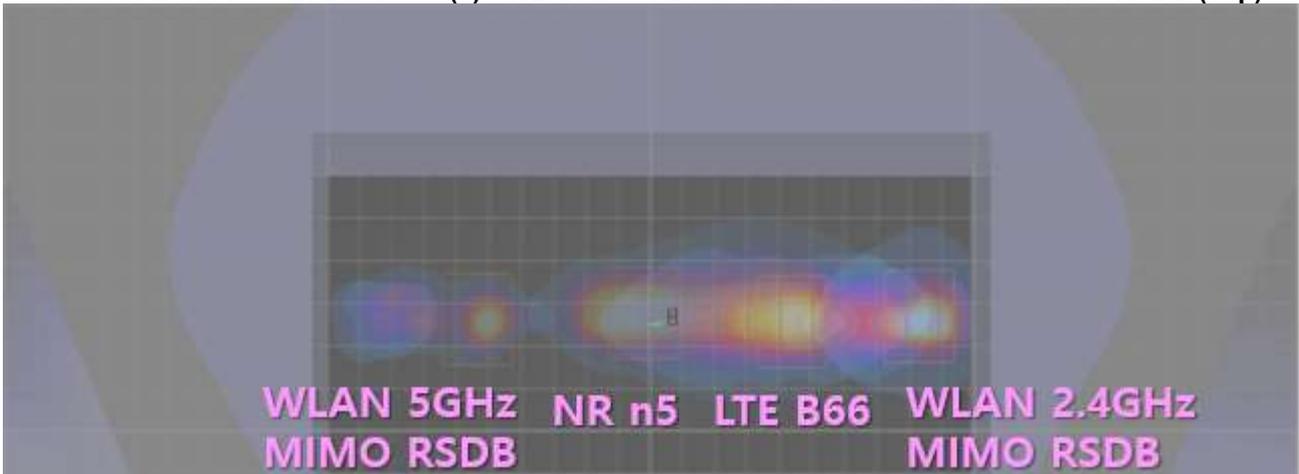
Plot #57 LTE Band 25(2) + Bluetooth Ant.2 + WLAN 5GHz MIMO(Top)



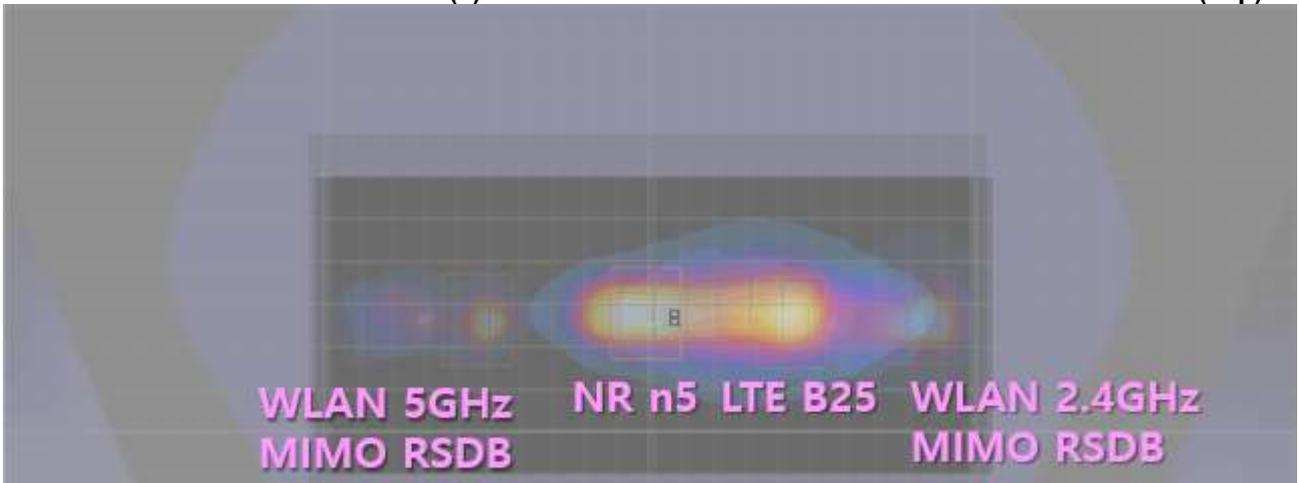
Plot #58 LTE Band 66(4) + Bluetooth Ant.2 + WLAN 5GHz MIMO(Top)



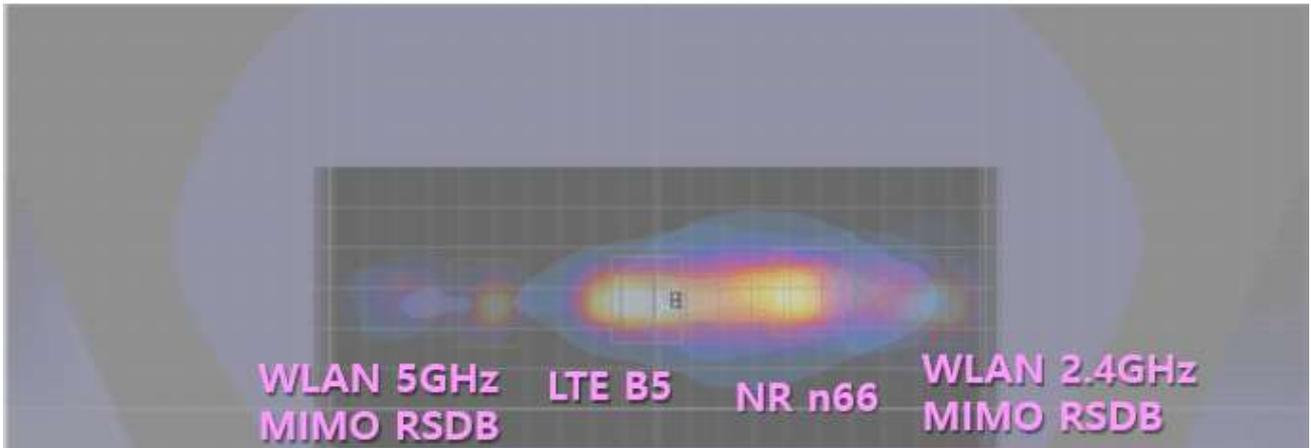
Plot #59NR Band n5 + LTE Band 66(4) +WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)



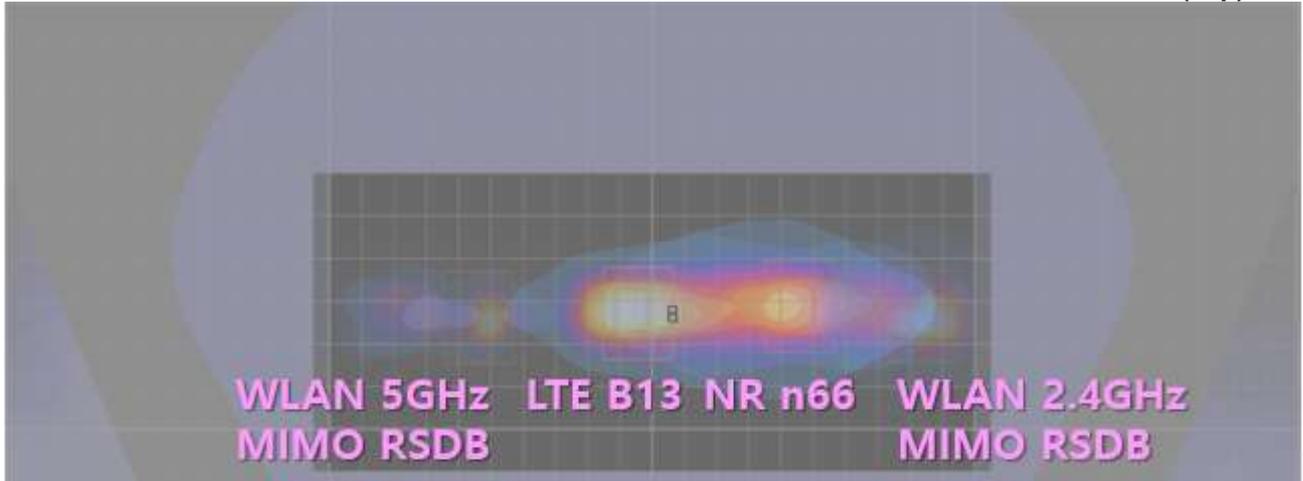
Plot #60NR Band n5 + LTE Band 25(2) +WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)



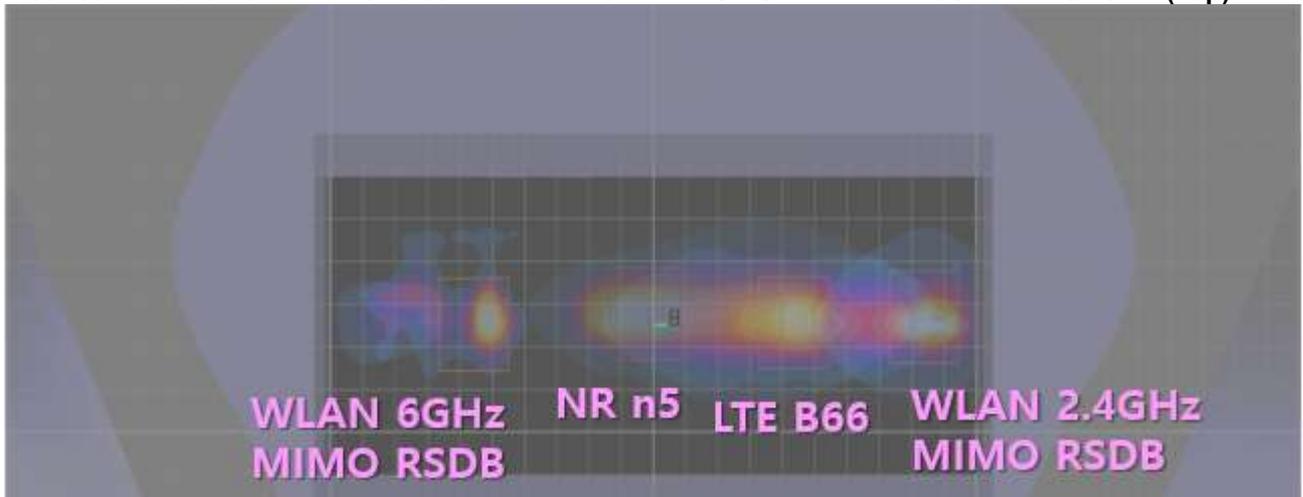
**Plot #61NR Band n66 + LTE Band 5 +WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)**



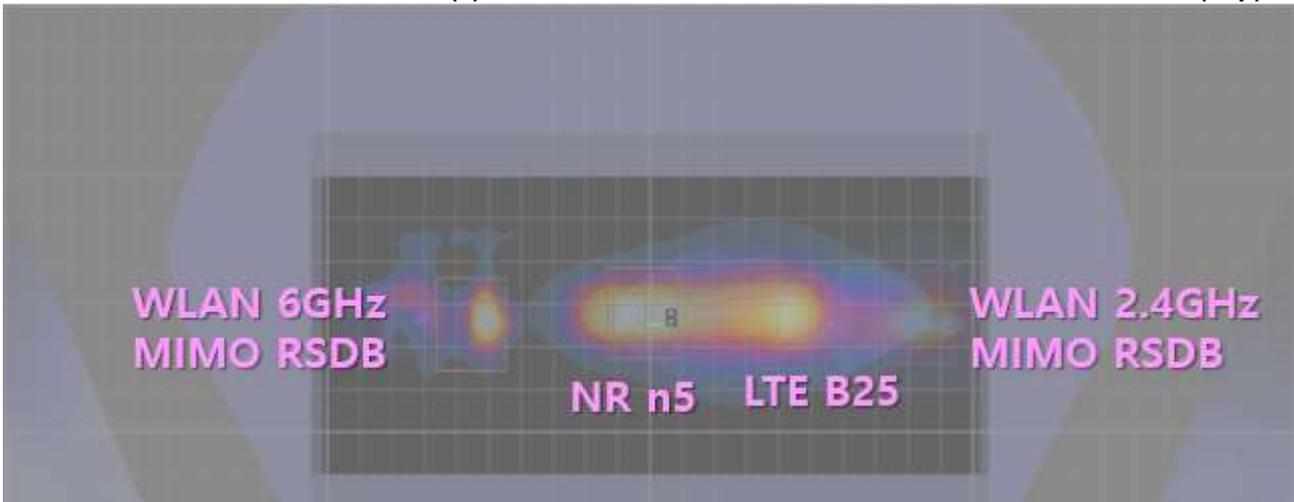
**Plot #62NR Band n66 + LTE Band 13 +WLAN 2.4GHz MIMO RSDB + WLAN 5GHz MIMORSDB (Top)**



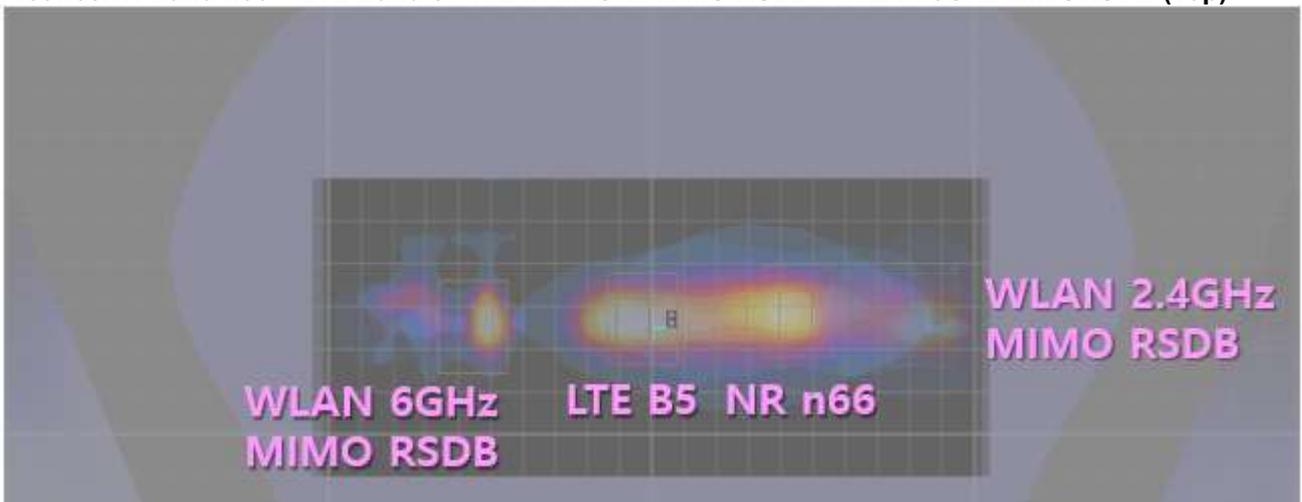
**Plot #63NR Band n5 + LTE Band 66 +WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMORSDB (Top)**



**Plot #64NR Band n5 + LTE Band 25(2) +WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMORSDB (Top)**



**Plot #65NR Band n66 + LTE Band 5 +WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMORSDB (Top)**



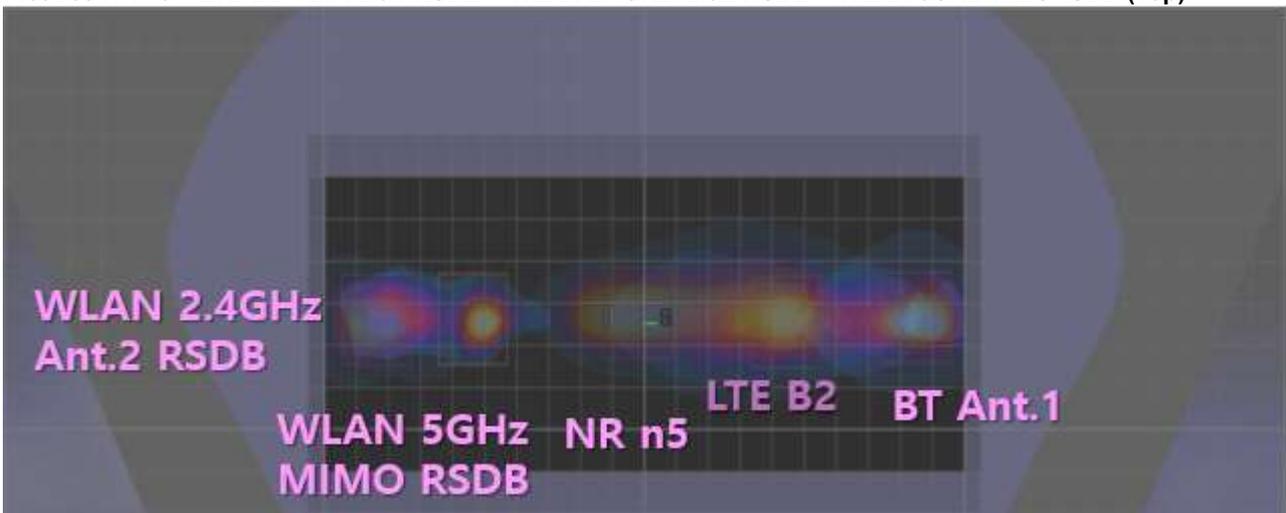
**Plot #66NR Band n66 + LTE Band 13 +WLAN 2.4GHz MIMO RSDB + WLAN 6GHz MIMORSDB (Top)**



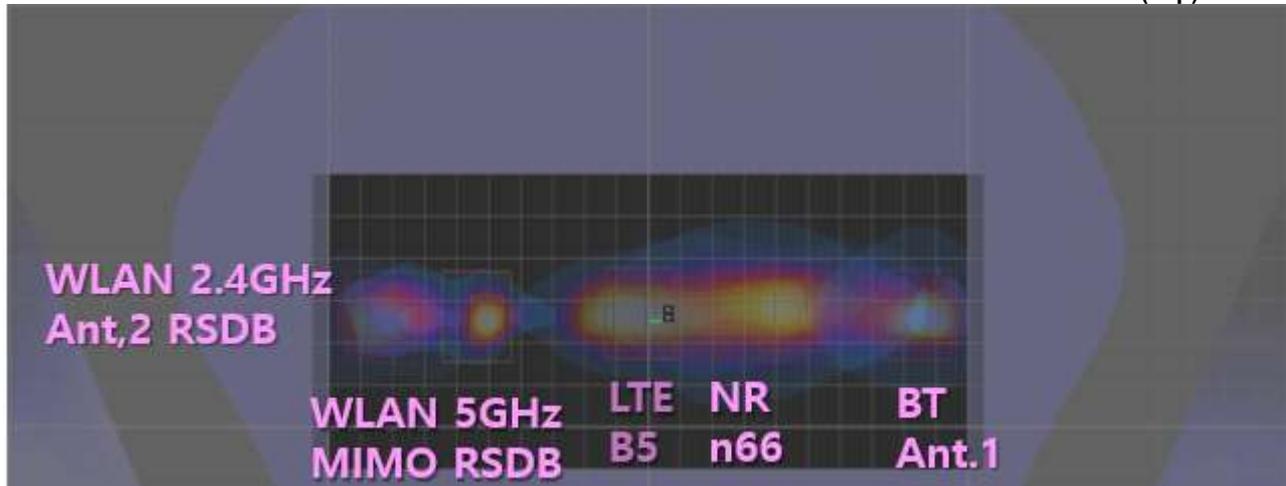
Plot #67 NR n5 + LTE B66 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



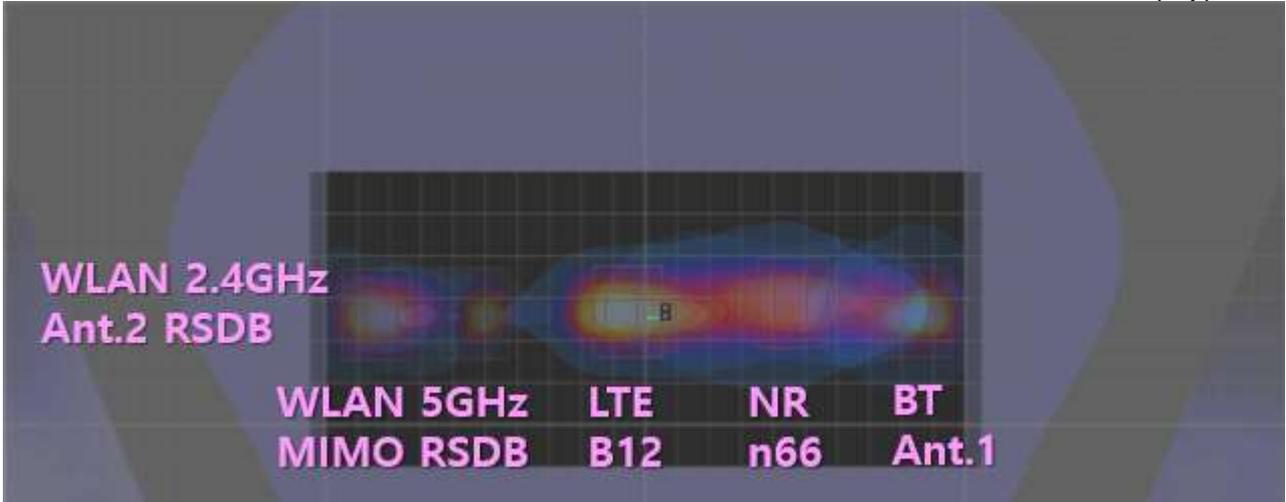
Plot #68 NR n5 + LTE B2 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



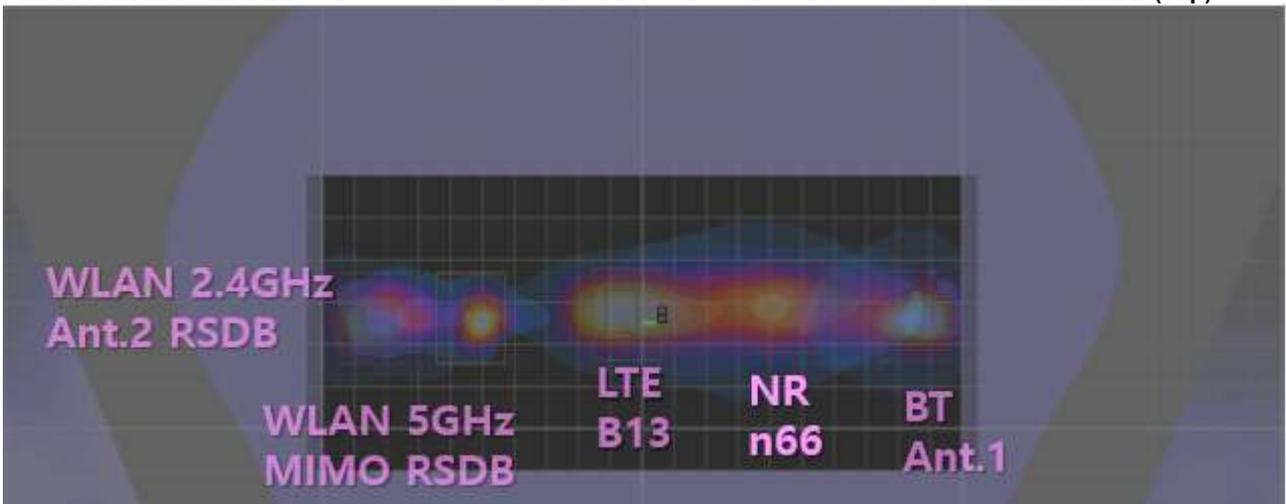
Plot #69 NR n66 + LTE B5 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



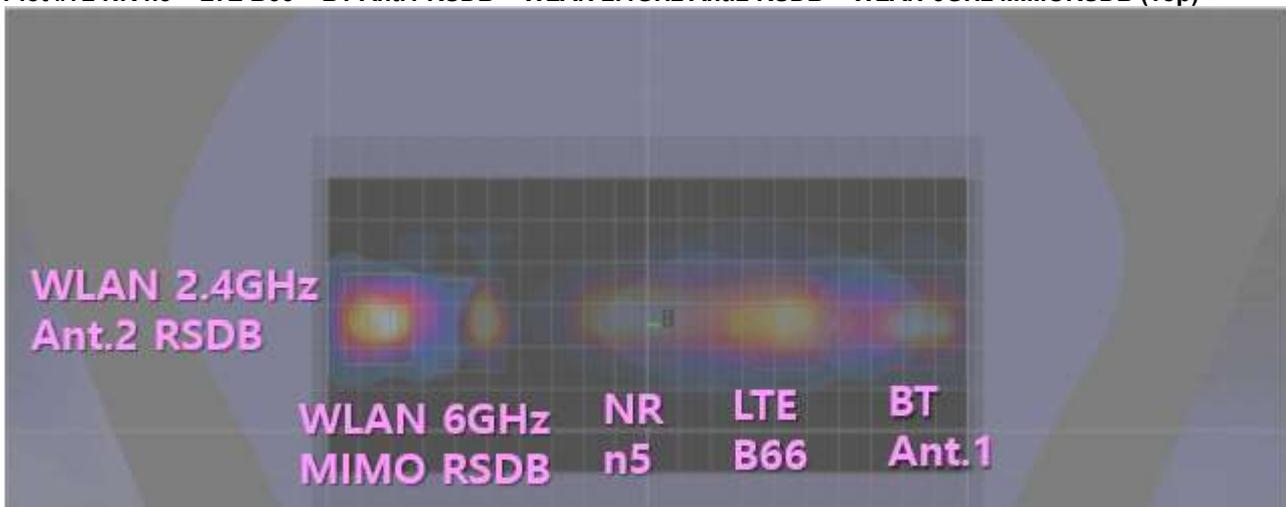
Plot #70 NR n66 + LTE B12 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



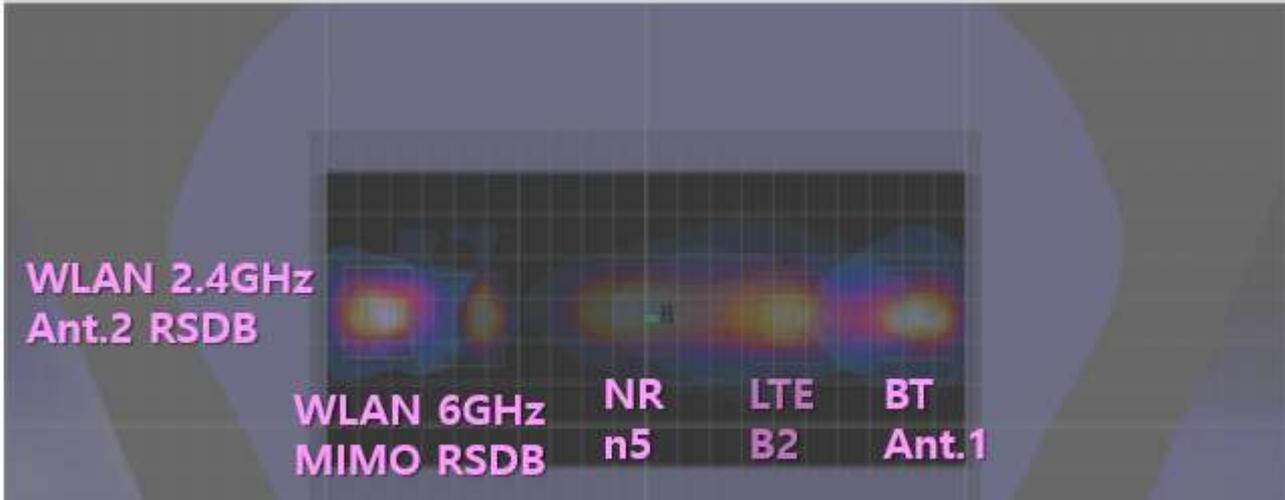
Plot #71 NR n66 + LTE B13 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



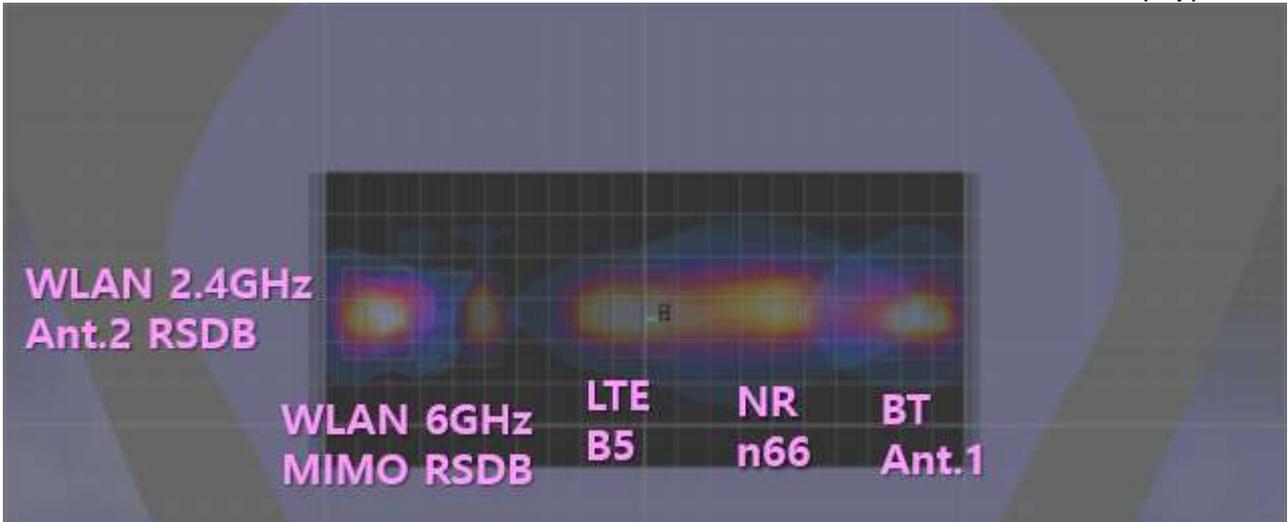
Plot #72 NR n5 + LTE B66 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



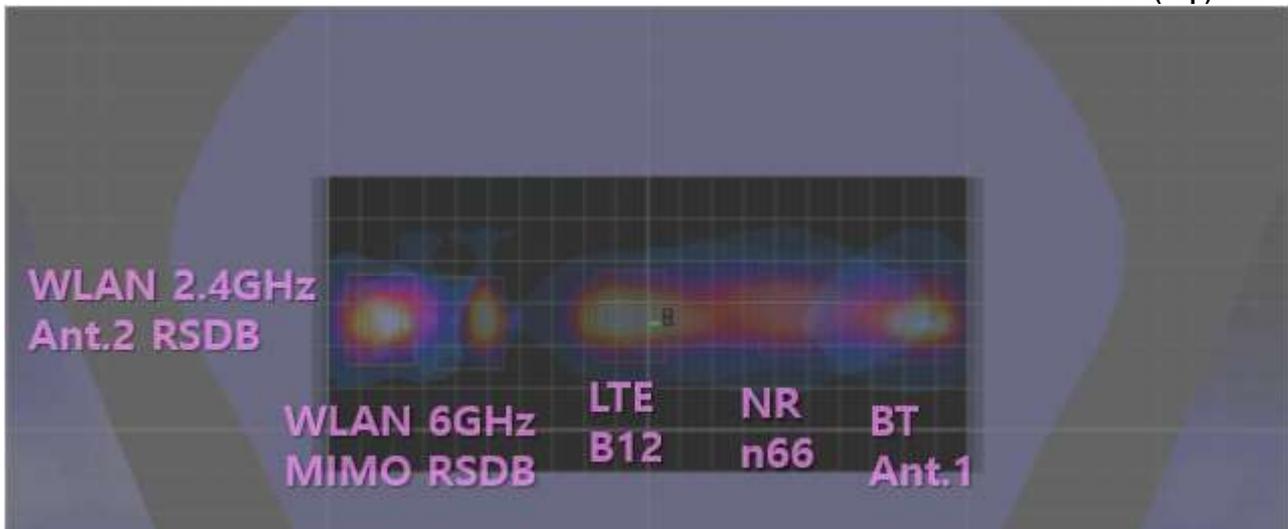
Plot #73 NR n5 + LTE B2 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



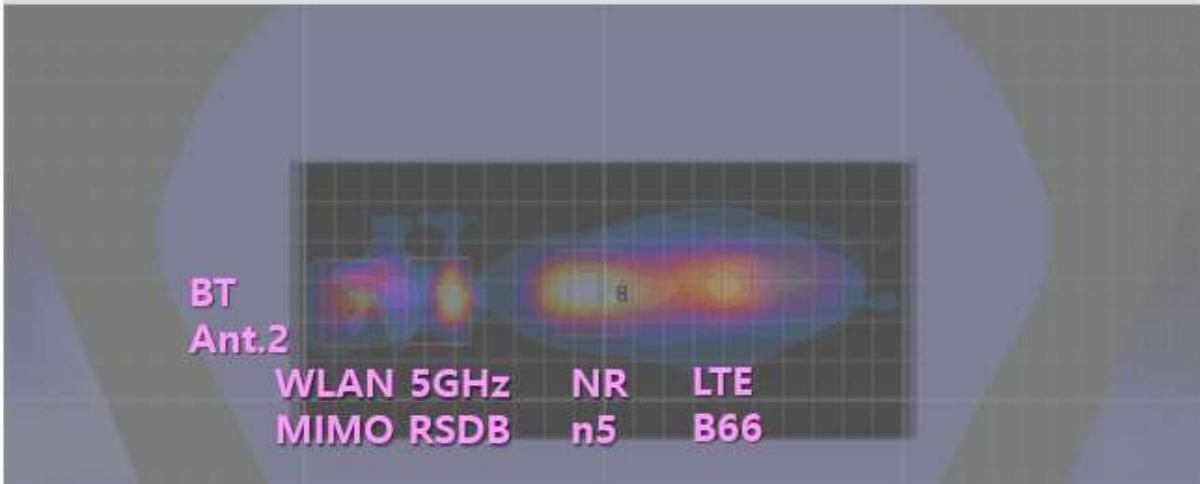
Plot #74 NR n66 + LTE B5 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



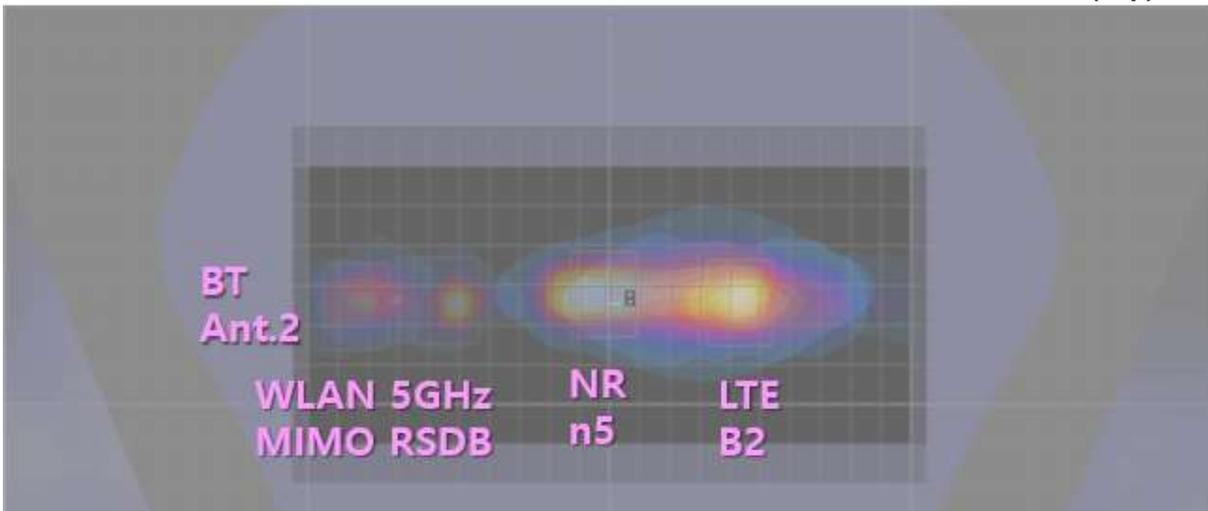
Plot #75 NR n66 + LTE B12 + BT Ant.1 RSDB + WLAN 2.4GHz Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



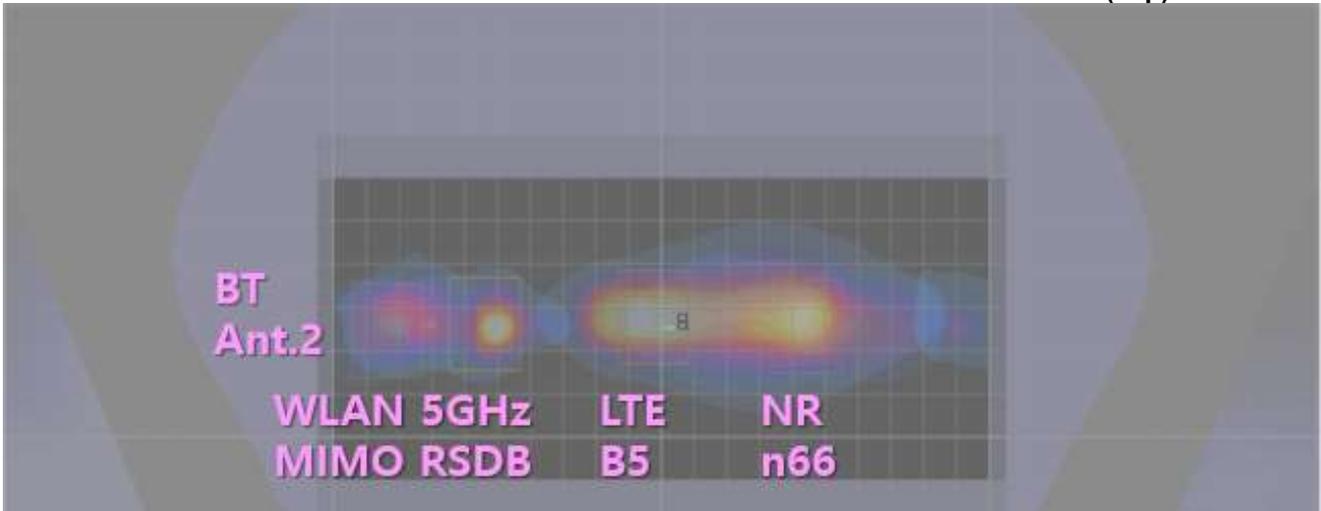
**Plot #76NR Band n5 + LTE Band 66 +Bluetooth Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)**



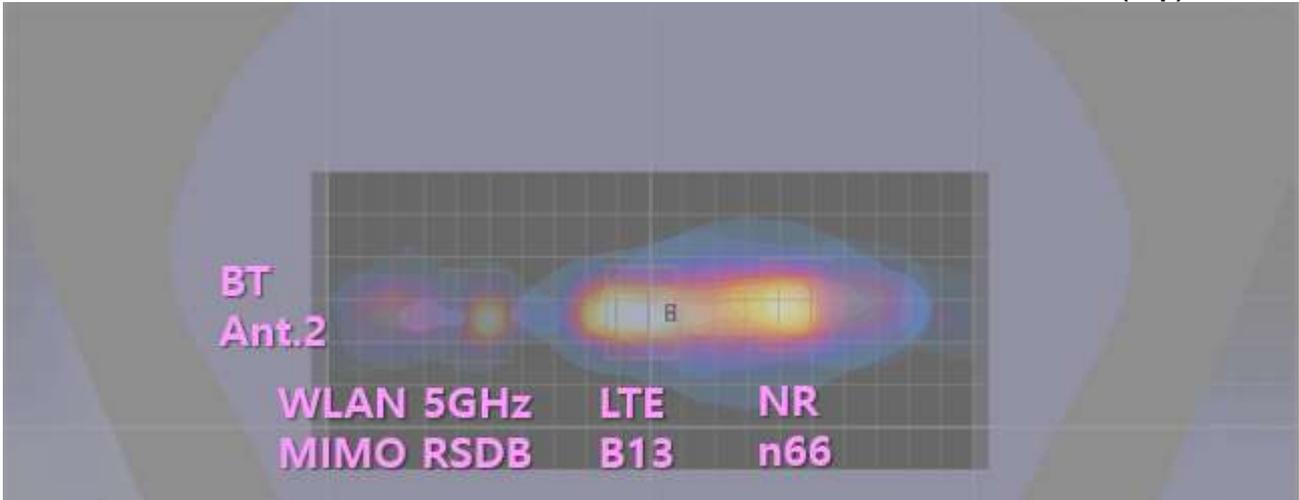
**Plot #77NR Band n5 + LTE Band 2 +Bluetooth Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)**



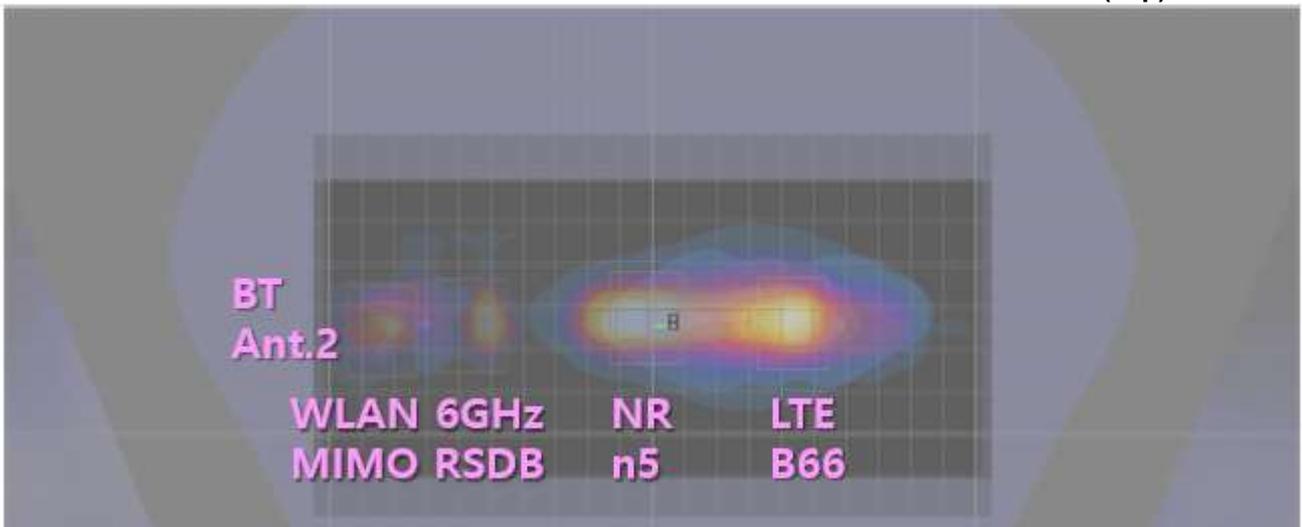
**Plot #78NR Band n66 + LTE Band 5 +Bluetooth Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)**



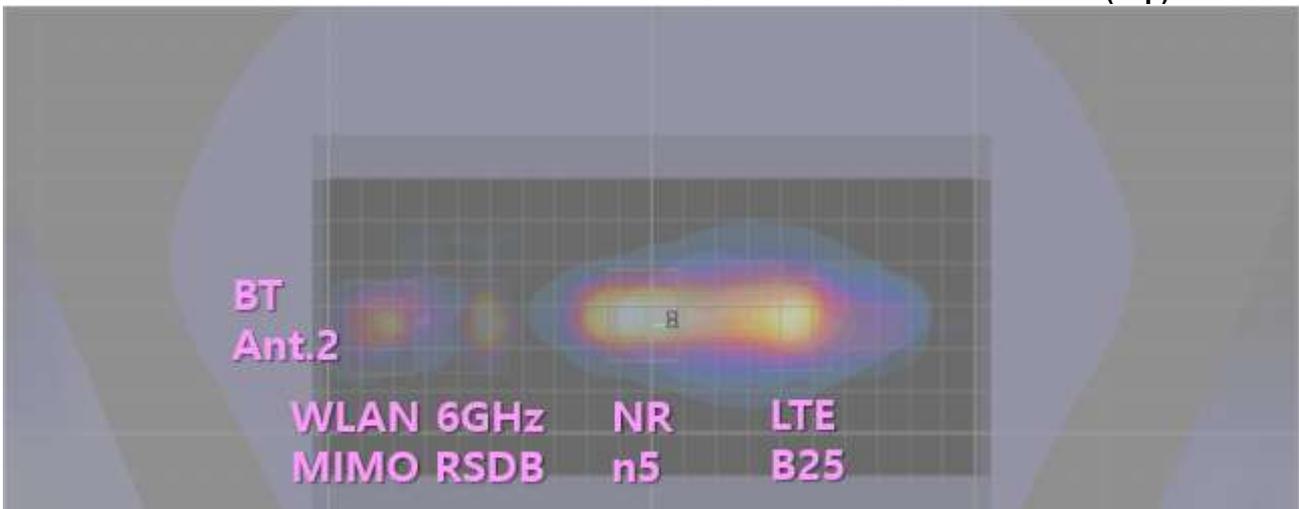
Plot #79NR Band n66 + LTE Band 13 +Bluetooth Ant.2 RSDB + WLAN 5GHz MIMORSDB (Top)



Plot #80NR Band n5 + LTE Band 66 +Bluetooth Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



Plot #81NR Band n5 + LTE Band 25 +Bluetooth Ant.2 RSDB + WLAN 6GHz MIMORSDB (Top)



#### **14.2.4 Additional Simultaneous SAR Evaluation and Analysis for Main Band, Bluetooth, 2.4GHz WLAN, and 5GHz WLAN Operation SPLSR Hotspot Combination**

Per November 2019 TCB Workshop Notes, SPLSR Hotspot Combination procedure can be applied to evaluate to simultaneous transmission SAR analysis.

The antennas for the unlicensed transmitters are closely located. As a result, the associated SAR Hotspots are also closely located. Some of the sum of SAR calculations yielded results over 1.6W/kg. The SPLSR calculations for these situations were performed by treating the unlicensed SAR values as a single transmitter. The most conservative distance between all the unlicensed hotspots to the licensed hotspot was used for the value of  $d$  in SPLSR calculation.

Hybrid SPLSR and enlarged zoom scan (Volume scan) can be applied when Simultaneous transmission SAR is over 1.6 W/kg for 1g or 4.0W/kg for 10g respectively, it does not meet SPLSR criteria, and antenna pair is co-located. Antenna co-location means that SAR distributions overlap because the antenna pair are not significantly spatially separated.

##### **Test Procedure:**

Step.1 perform enlarged zoom scan (Volume scan) on the co-located antenna pair to determine 1g/10g aggregate SAR.

Step.2 Apply SPLSR procedure for the spatially separated antenna and aggregate SAR distribution of the co-located antenna pair.

Step.1 perform enlarged zoom scan (Volume scan) on the co-located antenna pair to determine 1g/10g aggregate SAR.

Step.2 Apply SPLSR procedure for the spatially separated antenna and aggregate SAR distribution of the co-located antenna pair.

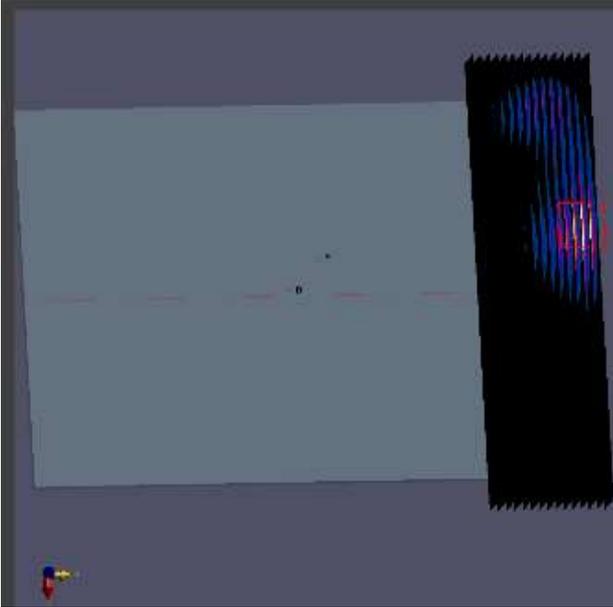
**SAR Enlarged Zoom Scan/Volume scan Result**

Configuration	Band	Mesured SAR	Volume SAR	Combined factor	Combined SAR	Plot No.
UMTS Band 4 + BT Ant1 Rear	UMTS Band 4	1.090	0.789	1.148	0.904	1
	BT Ant 1	0.447	0.318	1.472		
UMTS Band 2 + BT Ant1 Rear	UMTS Band 2	1.020	0.404	1.107	0.495	2
	BT Ant 1	0.447	0.318	1.472		
GSM 1900 + 2.4G MIMO Rear	GSM 1900	0.908	0.327	1.135	0.855	3
	2.4G MIMO	0.767	0.660	1.255		
UMTS Band 4 + 2.4G MIMO Rear	UMTS Band 4	1.090	0.789	1.148	0.904	4
	2.4G MIMO	0.767	0.660	1.255		
UMTS Band 2 2.4G MIMO Rear	UMTS Band 2	1.020	0.404	1.107	0.854	5
	2.4G MIMO	0.767	0.660	1.255		
LTE Band 66 + 2.4G MIMO Rear	LTE Band 66	1.190	0.651	1.190	0.869	6
	2.4G MIMO	0.767	0.660	1.255		
UMTS Band 4 + 2.4G MIMO RSDB Rear	UMTS Band 4	1.090	0.789	1.148	0.927	7
	2.4G MIMO RSDB	0.401	0.342	1.255		
UMTS Band 2 + 2.4G MIMO RSDB Rear	UMTS Band 2	1.020	0.404	1.107	0.472	8
	2.4G MIMO RSDB	0.401	0.342	1.255		
NR Band n5 + LTE Band 66 Rear	NR Band n5	0.308	0.542	1.014	1.130	9
	LTE Band 66	1.190	0.651	1.190		
NR Band n5 + LTE Band 25 Rear	NR Band n5	0.308	0.542	1.014	0.886	10
	LTE Band 25	0.552	0.535	1.265		
NR Band n66 + 2.4G MIMO RSDB Rear	NR Band n66	0.914	0.567	1.067	0.624	11
	2.4G MIMO RSDB	0.401	0.342	1.255		
NR Band n66 + LTE Band 26(5) Rear	NR Band n66	0.914	0.567	1.067	0.940	12
	LTE Band 26(5)	0.402	0.631	1.340		
NR Band n66 + LTE Band 12 Rear	NR Band n66	0.914	0.567	1.067	0.648	13
	LTE Band 12	0.630	0.812	1.084		
NR Band n66 + LTE Band 13 Rear	NR Band n66	0.914	0.567	1.067	0.989	14
	LTE Band 13	0.591	0.584	1.256		
2.4G Ant2 RSDB + 5G MIMO RSDB Rear	2.4G Ant2 RSDB	0.279	0.286	1.351	0.410	15
	5G MIMO RSDB	0.465	0.217	1.326		
2.4G Ant2 RSDB + 6G MIMO RSDB Rear	2.4G Ant2 RSDB	0.279	0.286	1.351	0.417	16
	6G MIMO RSDB	0.607	0.299	1.259		
BT Ant 2 + 5G MIMO Rear	BT Ant 2	0.246	0.590	1.519	0.924	17
	5G MIMO RSDB	0.591	0.352	1.326		
BT Ant 2 + 6G MIMO Rear	BT Ant 2	0.246	0.590	1.519	0.896	18
	6G MIMO RSDB	0.881	0.426	1.259		
BT Ant 2 RSDB + 5G MIMO RSDB Rear	BT Ant 2 RSDB	0.118	0.100	1.519	0.345	19
	5G MIMO RSDB	0.465	0.217	1.326		
BT Ant 2 RSDB + 6G MIMO RSDB Rear	BT Ant 2 RSDB	0.118	0.100	1.519	0.453	20
	6G MIMO RSDB	0.607	0.299	1.259		

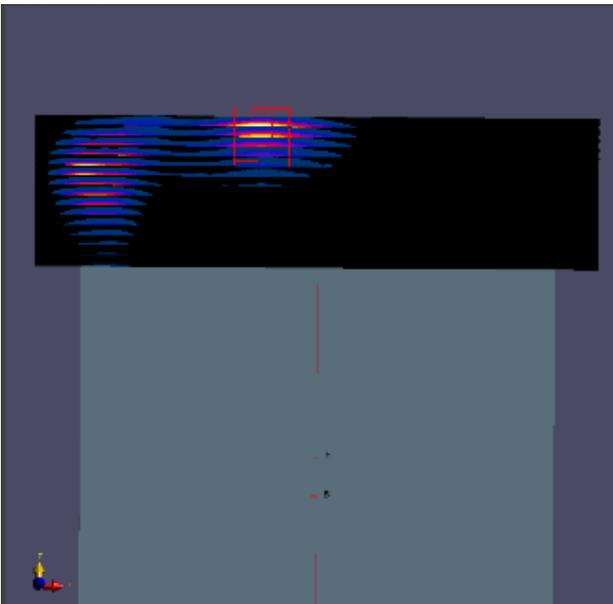
Configuration	Band	Mesured SAR	Volume SAR	Combined factor	Combined SAR	Plot No.
NR Band n5 + LTE Band 66(4) + 2.4G MIMO RSDB Rear	NR Band n5	0.914	0.567	1.067	1.150	21
	LTE Band 66(4)	0.402	0.631	1.340		
	2.4G MIMO RSDB	0.401	0.342	1.351		
NR Band n5 + LTE Band 25(2) + 2.4G MIMO RSDB Rear	NR Band n5	0.914	0.567	1.067	0.905	22
	LTE Band 25(2)	0.402	0.631	1.340		
	2.4G MIMO RSDB	0.401	0.342	1.351		
NR Band n66 + LTE Band 26(5) + 2.4G MIMO RSDB Rear	NR Band n66	0.914	0.567	1.067	0.958	23
	LTE Band 26(5)	0.402	0.631	1.340		
	2.4G MIMO RSDB	0.401	0.342	1.351		
NR Band n66 + LTE Band 12 + 2.4G MIMO RSDB Rear	NR Band n66	0.914	0.567	1.067	0.889	24
	LTE Band 12	0.630	0.812	1.084		
	2.4G MIMO RSDB	0.401	0.342	1.351		
NR Band n66 + LTE Band 13 + 2.4G MIMO RSDB Rear	NR Band n66	0.914	0.567	1.067	0.936	25
	LTE Band 13	0.591	0.584	1.256		
	2.4G MIMO RSDB	0.401	0.342	1.351		
2.4G Ant2 RSDB + 5G MIMO RSDB Rear	2.4G Ant2 RSDB	0.279	0.286	1.351	0.332	26
	5G MIMO RSDB	0.465	0.217	1.326		
2.4G Ant2 RSDB + 6G MIMO RSDB Rear	2.4G Ant2 RSDB	0.279	0.286	1.351	0.417	27
	6G MIMO RSDB	0.607	0.299	1.259		
UMTS Band 2 +	UMTS Band 2	0.868	0.779	1.107	0.869	28
Bluetooth Ant 1 Top	Bluetooth Ant1	0.249	0.209	1.478		
LTE Band 25(2) +	LTE Band 25(2)	0.824	0.756	1.352	1.020	29
Bluetooth Ant 1 Top	Bluetooth Ant1	0.249	0.209	1.478		
LTE Band 66(4) + Bluetooth Ant 1 Top	LTE Band 66(4)	1.060	1.050	1.050	1.100	30
	Bluetooth Ant1	0.249	0.209	1.478		
LTE Band 66(4) + WLAN 2.4G MIMO Top	LTE Band 66(4)	1.060	1.050	1.050	0.645	31
	WLAN 2.4G MIMO	0.461	0.481	1.255		

### 14.2.5 CombineSAR

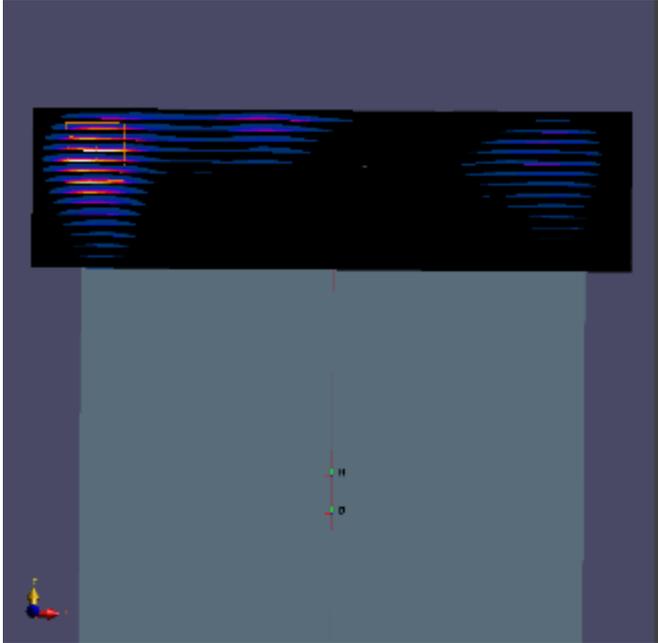
Plot #1 UMTS Band 4 + BT Ant1 Rear



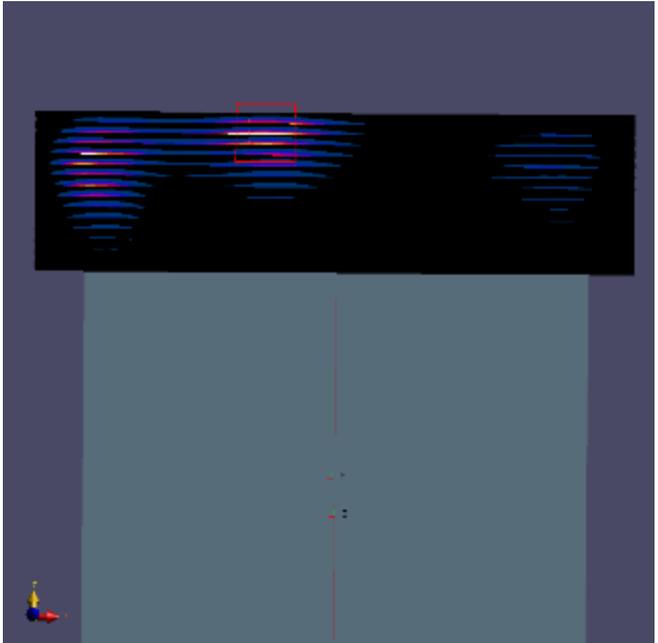
Plot #2 UMTS Band 2 + BT Ant1 Rear



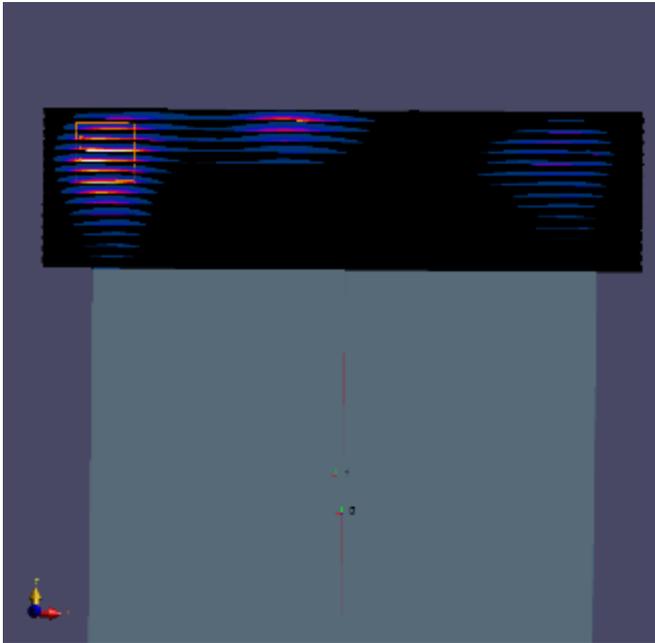
Plot #3 GSM 1900+2.4GHz MIMO Rear



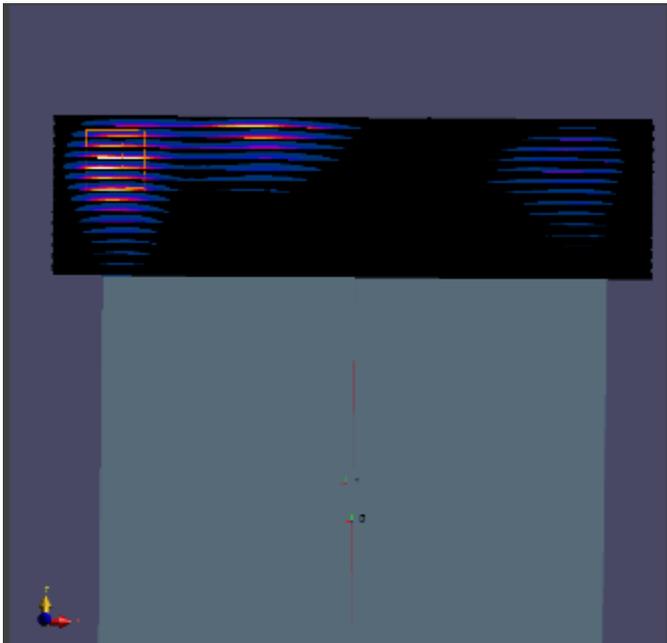
Plot #4 UMTS Band 4 + 2.4G MIMO Rear



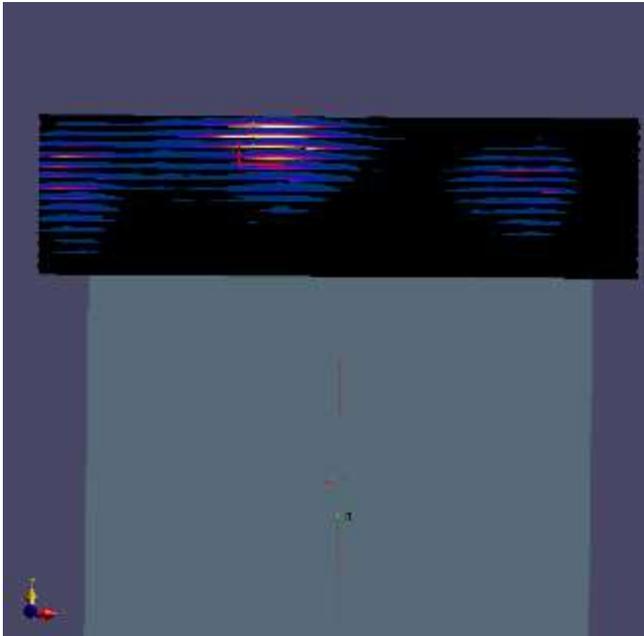
Plot #5 UMTS Band 2 + 2.4G MIMO Rear



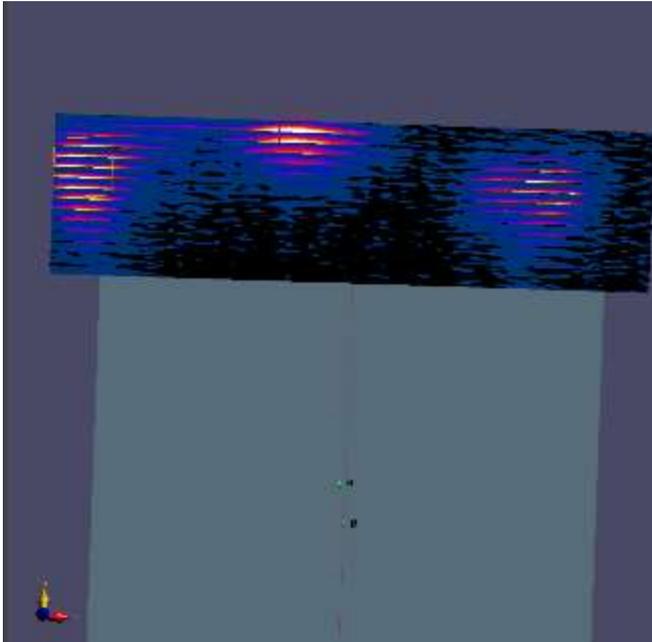
Plot #6 LTE Band 66+ 2.4G MIMO Rear



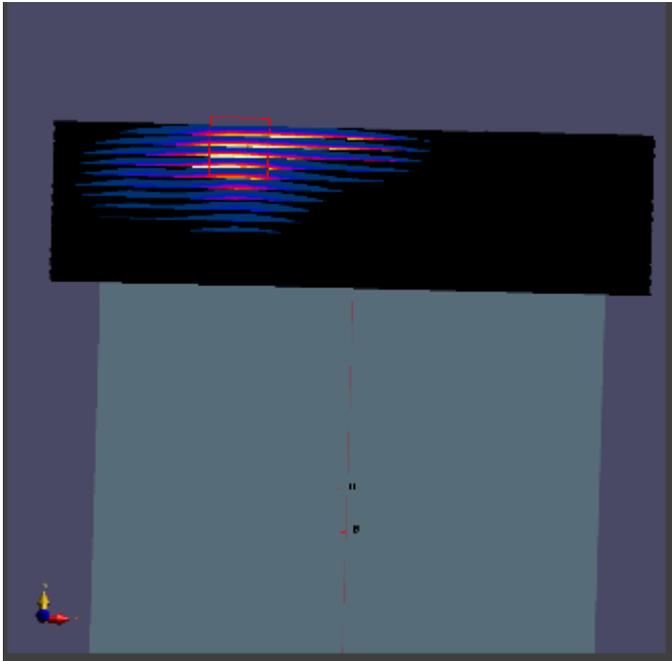
**Plot #7** UMTS Band 4 + 2.4G MIMO RSDB Rear



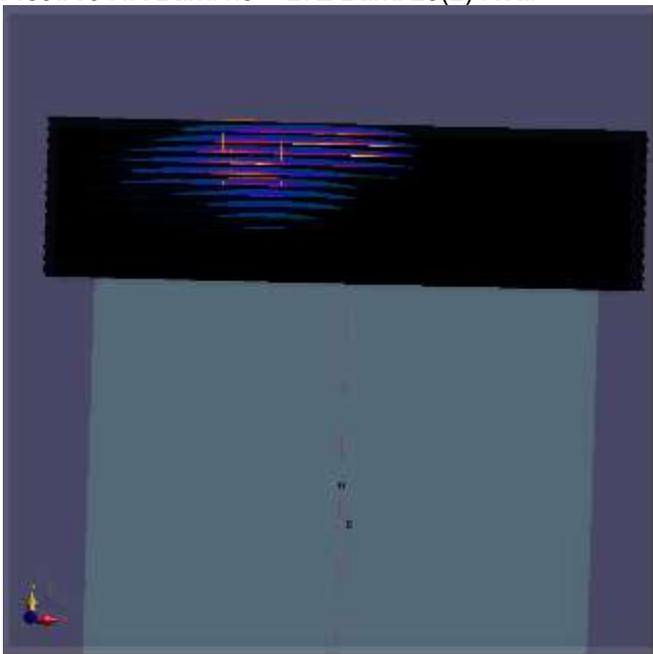
**Plot #8** UMTS Band 2 + 2.4G MIMO RSDB Rear



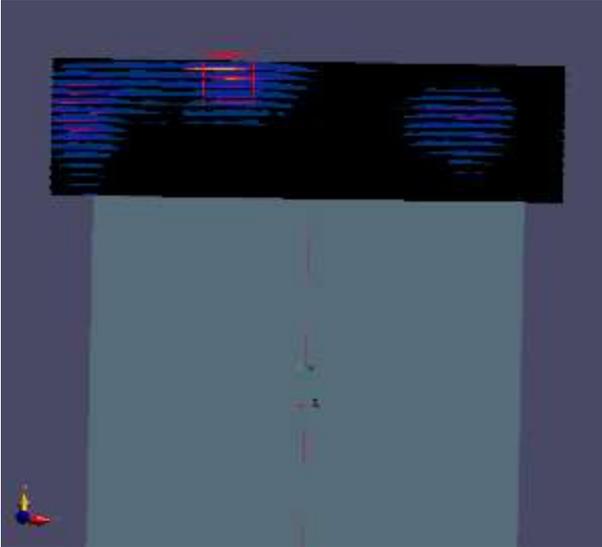
Plot #9 NR Band n5 + LTE Band 66 Rear



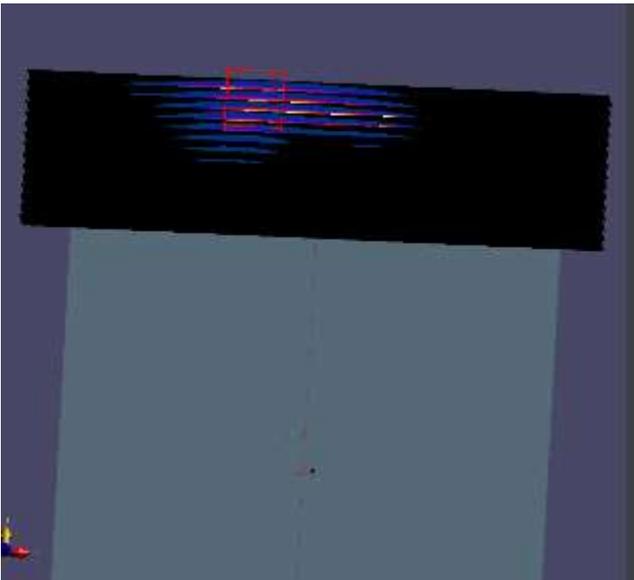
Plot #10 NR Band n5 + LTE Band 25(2) Rear



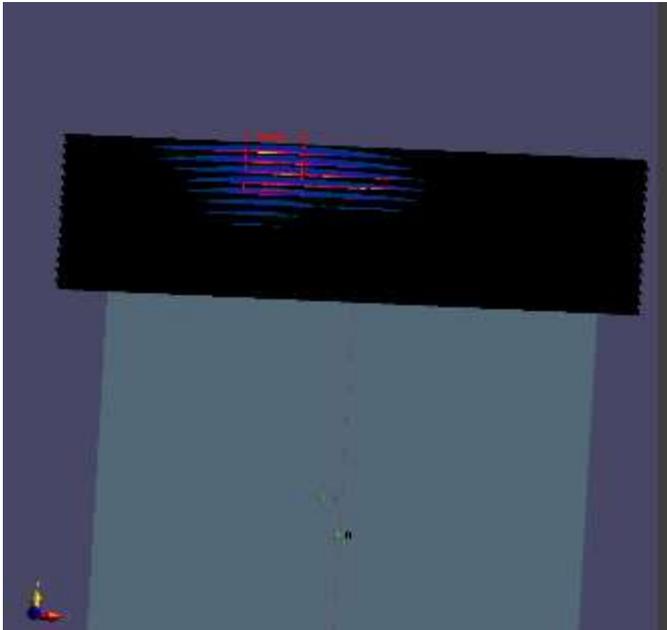
**Plot #11** NR Band n66 + WLAN 2.4G MIMO RSDB Rear



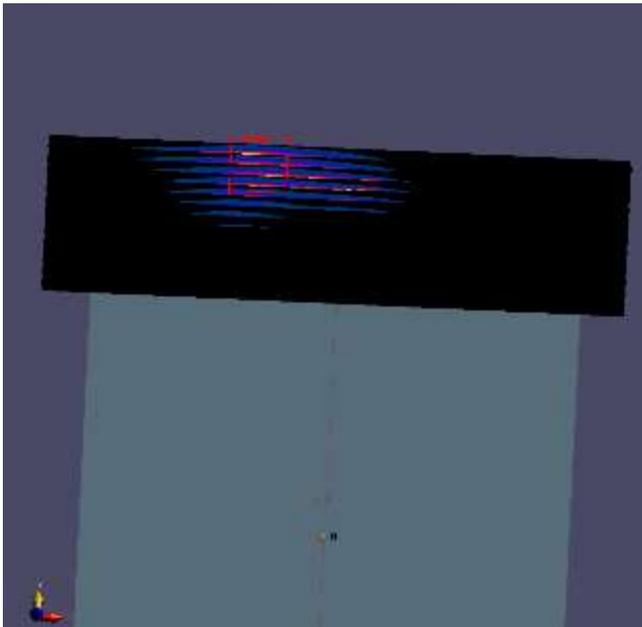
**Plot #12** NR Band n66 + LTE 26 Rear



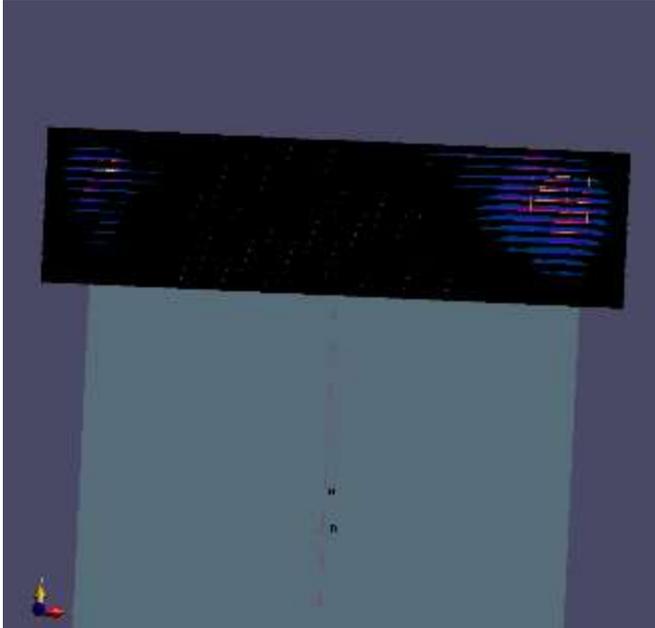
**Plot #13** NR Band n66 + LTE Band 12 Rear



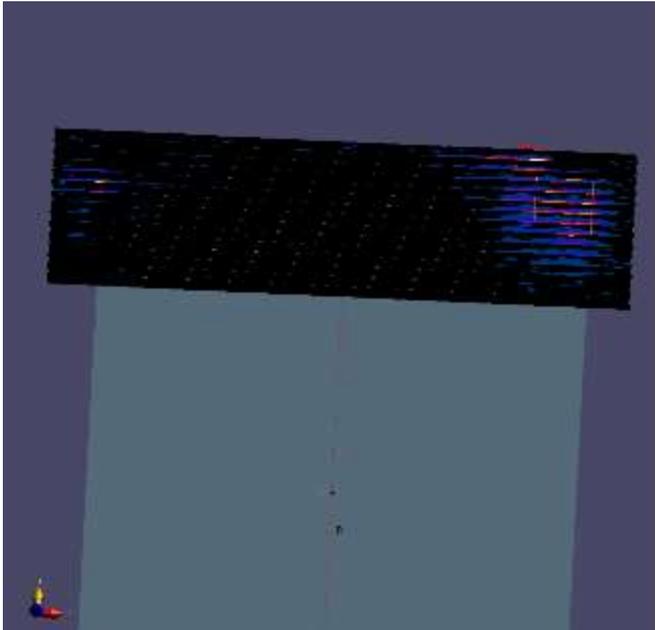
**Plot #14** NR Band n66 + LTE Band 13 Rear



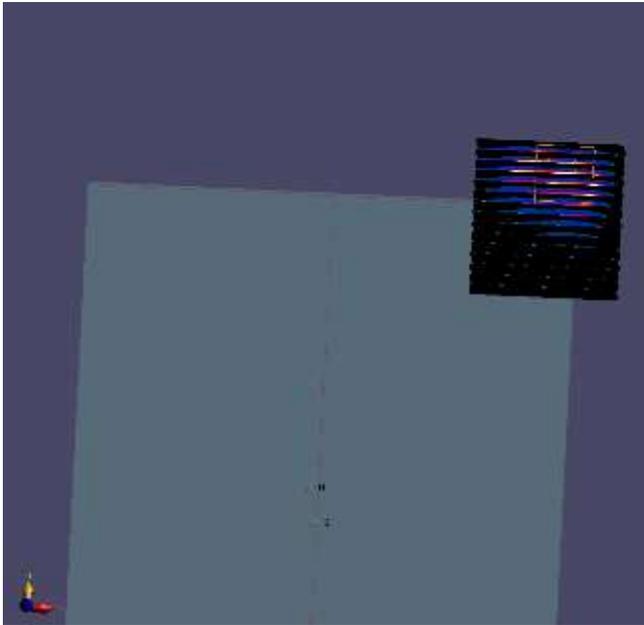
**Plot #15** WLAN 2.4G Ant.2 RSDB + WLAN 5G MIMO RSDB Rear



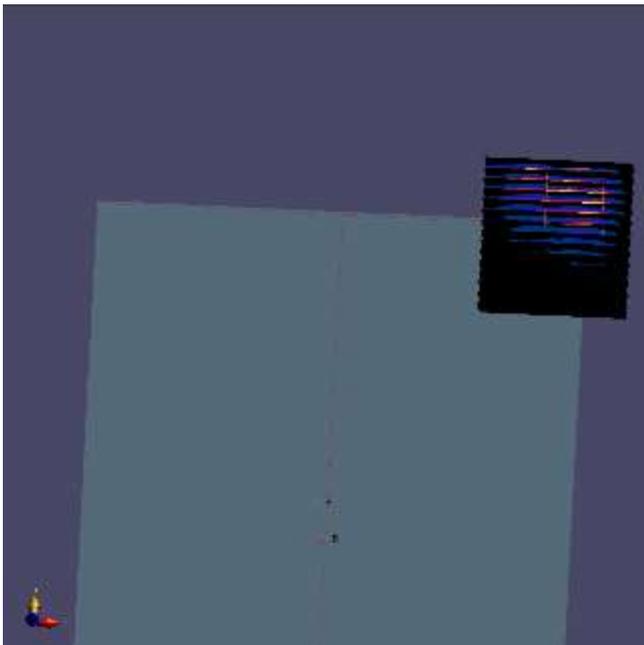
**Plot #16** WLAN 2.4G Ant.2 RSDB + WLAN 6G MIMO RSDB Rear



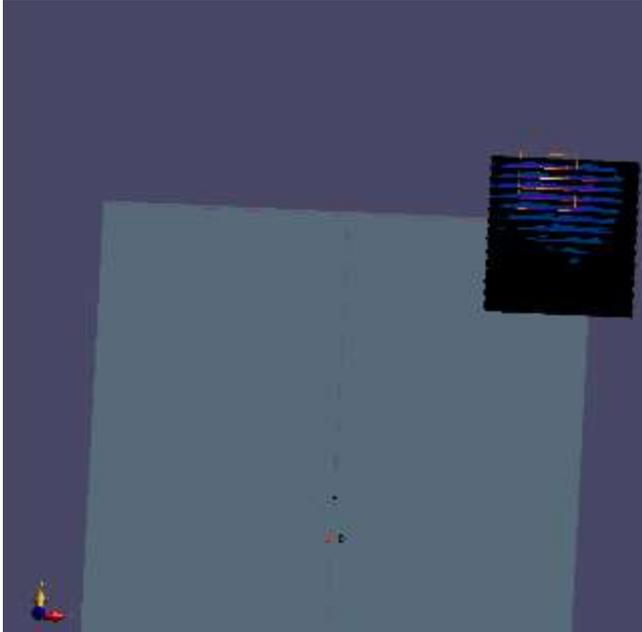
**Plot #17** BT Ant.2 + WLAN 5G MIMO RSDB Rear



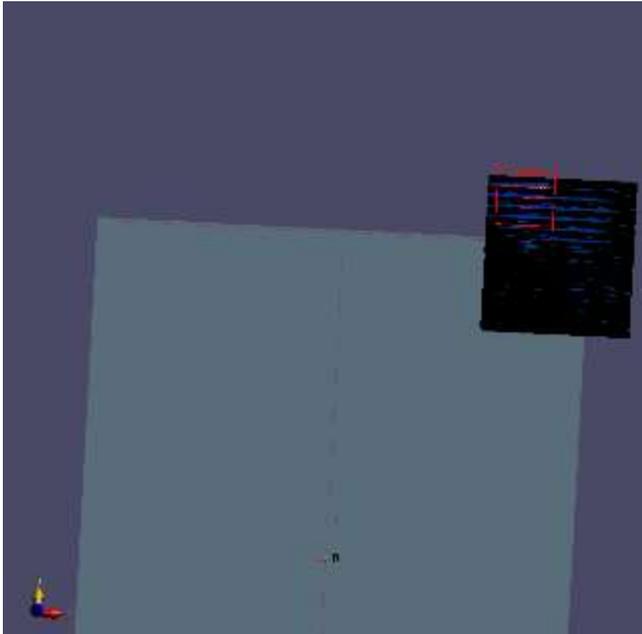
**Plot #18** BT Ant.2 + WLAN 6G MIMO RSDB Rear



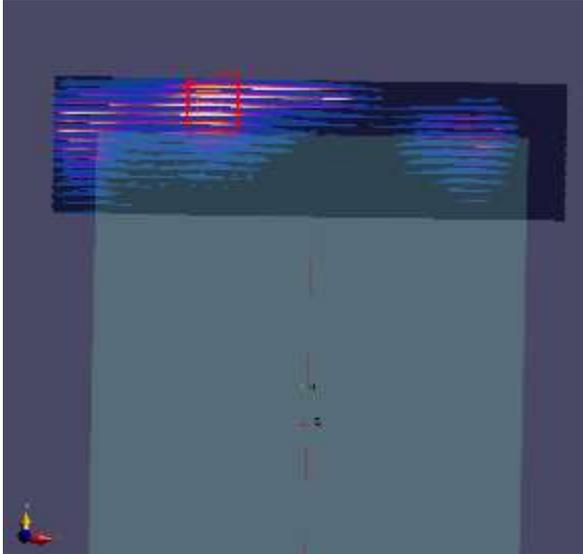
**Plot #19** BT Ant.2 RSDB + WLAN 5G MIMO RSDB Rear



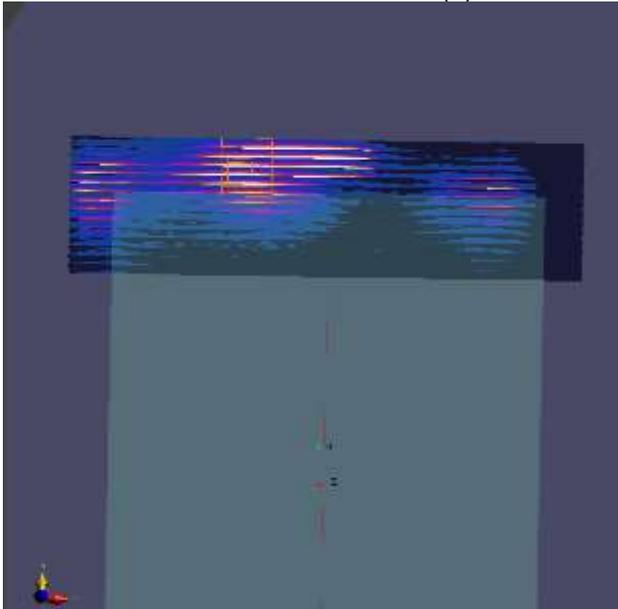
**Plot #20** BT Ant.2 RSDB + WLAN 6G MIMO RSDB Rear



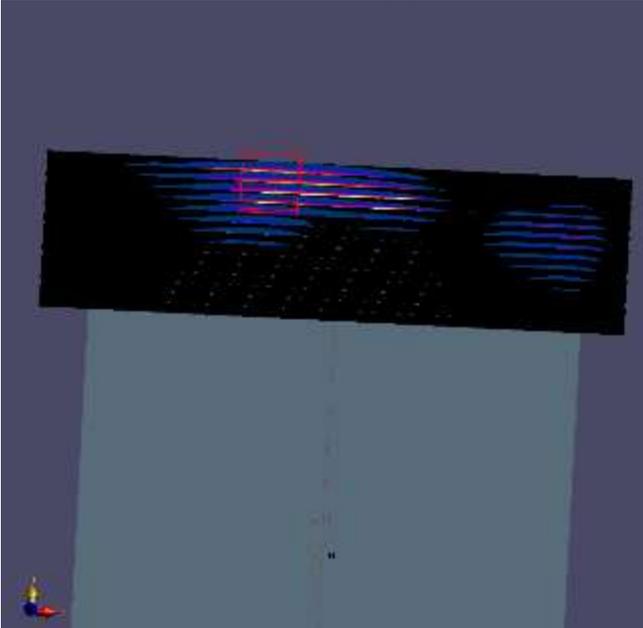
**Plot #21** NR Band n5 + LTE Band 66 + WLAN 2.4G MIMO RSDB Rear



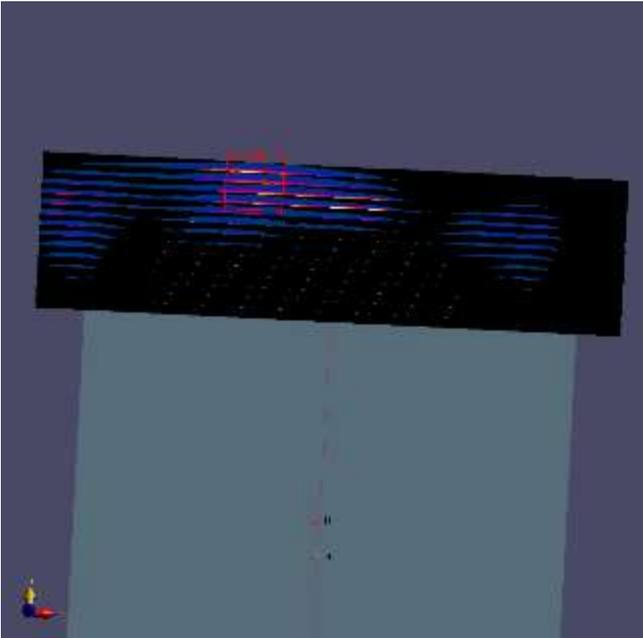
**Plot #22** NR Band n5 + LTE Band 25(2) + WLAN 2.4G MIMO RSDB Rear



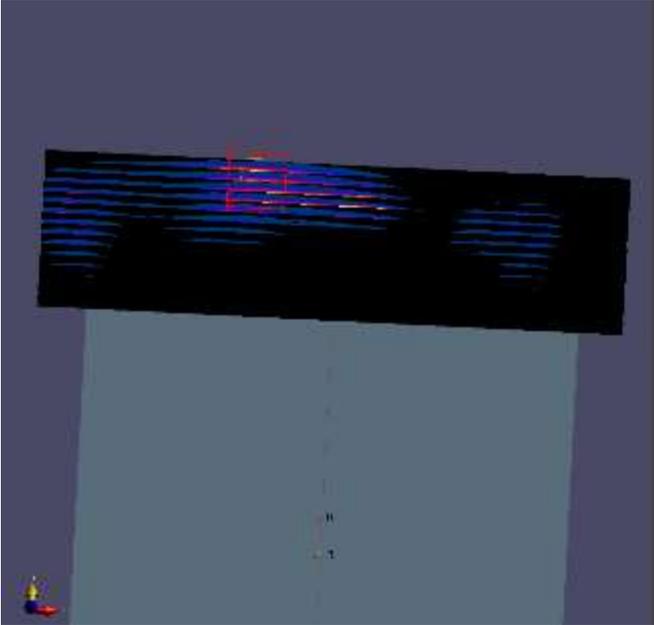
**Plot #23** NR Band n66 + LTE 26(5) +2.4G MIMO RSDB Rear



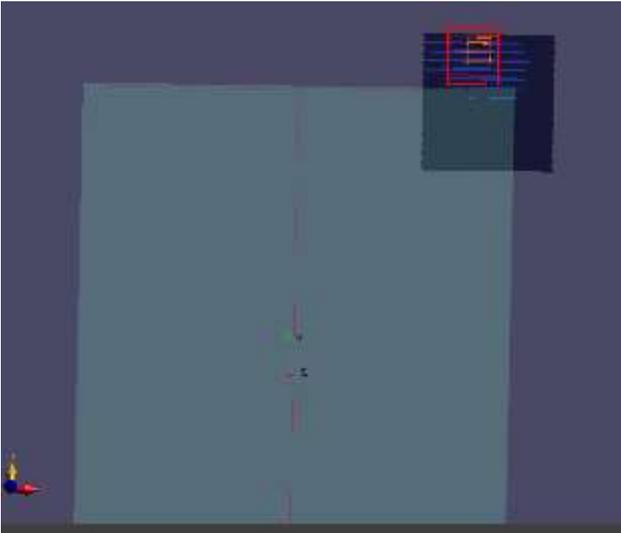
**Plot #24** NR Band n66 + LTE Band 12 + WLAN 2.4G MIMO RSDB Rear



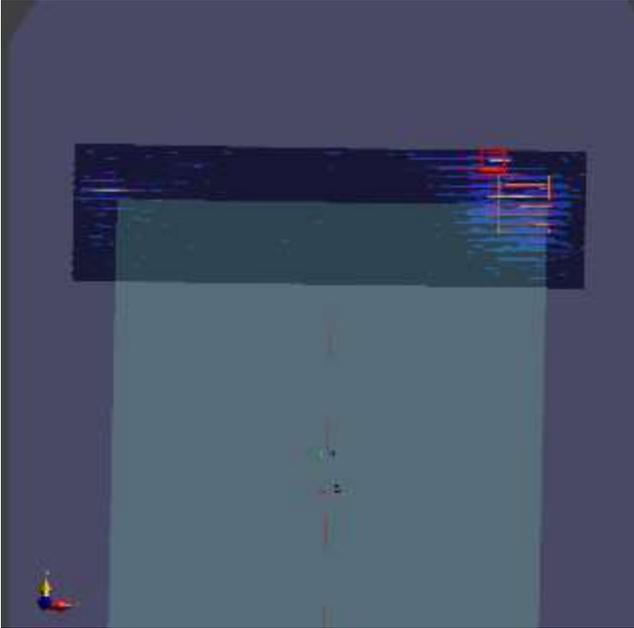
**Plot #25** NR Band n66 + LTE Band 13 + WLAN 2.4G MIMO RSDB Rear



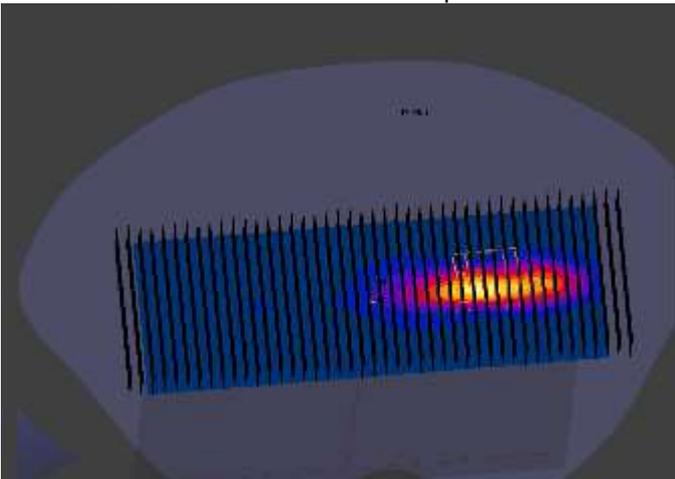
**Plot #26** WLAN 2.4G MIMO RSDB + WLAN 5G MIMO RSDB Rear



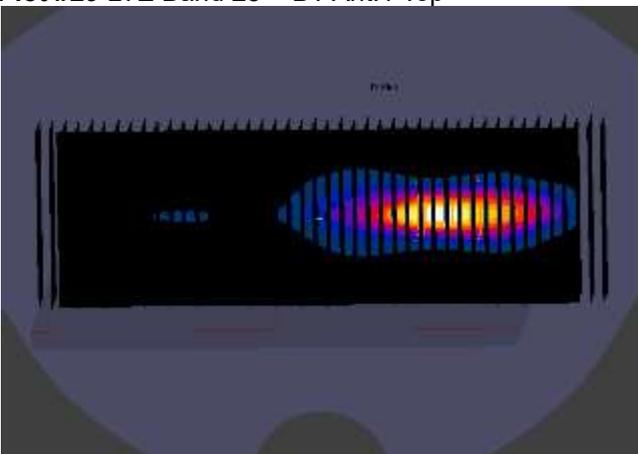
**Plot #27** WLAN 2.4G MIMO RSDB + WLAN 6G MIMO RSDB Rear



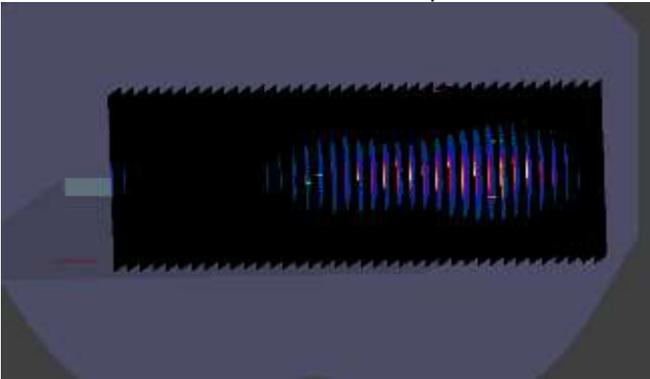
**Plot #28** UMTS Band 2 + BT Ant.1 Top



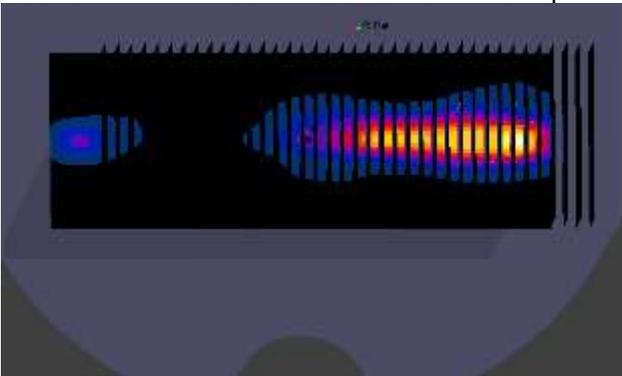
**Plot #29** LTE Band 25 + BT Ant.1 Top



**Plot #30** LTE Band 66 + BT Ant.1 Top



**Plot #31** LTE Band 66 + WLAN 2.4G MIMO Top



**-The Peak location of Aggregate SAR distribution**

Mode/Band	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
UMTS B4 + BT Ant 1 Rear	-28.50	148.50	-178.00	0.904
UMTS B2 + BT Ant 1 Rear	-30.00	148.50	-178.00	0.495
GSM1900 + 2.4G MIMO Rear	-28.50	150.00	-178.00	0.855
UMTS B4 + 2.4G MIMO Rear	-28.50	148.50	-178.00	0.904
UMTS B2 + 2.4G MIMO Rear	-30.00	148.50	-178.00	0.854
LTE 66 + 2.4G MIMO Rear	-18.00	148.50	-178.00	0.869
UMTS B4 + 2.4G MIMO RSDB Rear	-28.50	148.50	-178.00	0.927
UMTS B2 + 2.4G MIMO RSDB Rear	-30.00	148.50	-178.00	0.742
NR n5 + LTE 66 Rear	-18.00	148.50	-178.00	1.130
NR n5 + LTE 25 Rear	-28.50	148.50	-178.00	0.886
NR n66 + 2.4G MIMO RSDB Rear	-28.50	148.54	-178.00	0.624
NR n66 + LTE 26(5) Rear	-28.50	148.54	-178.00	0.940
NR n66 + LTE 12 Rear	-28.50	148.54	-178.00	0.648
NR n66 + LTE 13 Rear	-28.50	148.54	-178.00	0.989
2.4G MIMO RSDB +5G MIMO RSDB Rear	89.00	138.00	-178.00	0.410
2.4G MIMO RSDB +6G MIMO RSDB Rear	91.80	146.20	-178.00	0.417
BT Ant2 +5G MIMO	89.00	138.00	-178.00	0.924
BT Ant2 +6G MIMO	91.80	146.20	-178.00	0.896
BT Ant2 RSDB +5G MIMO RSDB Rear	89.00	138.00	-178.00	0.345
BT Ant2 RSDB +6G MIMO RSDB Rear	91.80	146.20	-178.00	0.453
NR n5 + LTE 66 + 2.4G MIMO RSDB Rear	-25.00	45.00	-203.98	1.150
NR n5 + LTE 25(2) + 2.4G MIMO RSDB Rear	-25.00	45.00	-203.98	0.905
NR n66 + LTE 26(5) + 2.4G MIMO RSDB Rear	-28.50	148.54	-178.00	0.958
NR n66 + LTE 12 + 2.4G MIMO RSDB Rear	-28.50	148.54	-178.00	0.889
NR n66 + LTE 13 + 2.4G MIMO RSDB Rear	-28.50	148.54	-178.00	0.958
UMTS B2 + BT Ant 1 Top	-25.00	45.00	-203.98	0.869
LTE 25(2) + BT Ant 1 Top	-25.00	45.00	-203.98	1.020
LTE 66(4) + BT Ant 1 Top	-25.00	45.00	-203.98	1.100
LTE 66(4) + 2.4G MIMO Top	-25.00	45.00	-203.98	0.645
2.4G Ant2 RSDB +5G MIMO RSDB Rear	89.00	138.00	-178.00	0.332
2.4G Ant2 RSDB +6G MIMO RSDB Rear	91.80	146.20	-178.00	0.417

Band		$\Sigma$ 1-g SAR (W/kg)	Peak SAR Separation Distance (mm)	SPLSR	Plot No.
1	2	1+2	1+2	1+2	
UMTS Band 4 + BT Ant1	5G MIMO	1.676	117.968	0.018	#1
UMTS Band 2 +BT Ant1		1.267	119.462	0.012	#2
UMTS Band 4 + BT Ant1	6G MIMO	2.069	120.322	0.025	#3
UMTS Band 2 +BT Ant1		1.660	121.822	0.018	#4
UMTS Band 4 + BT Ant1	2.4GHz Ant2	1.281	119.960	0.012	#5
UMTS Band 2 +BT Ant1		0.872	121.455	0.007	#6
UMTS Band 4+2.4GHz MIMO RSDB	5GHz MIMO RSDB	1.521	117.968	0.016	#7
UMTS Band 2+2.4GHz MIMO RSDB		1.471	119.462	0.015	#8
UMTS Band 4+2.4GHz MIMO RSDB	6GHz MIMO RSDB	1.678	120.322	0.018	#9
UMTS Band 2+2.4GHz MIMO RSDB		1.628	121.822	0.017	#10

Band			$\Sigma$ 1-g SAR (W/kg)			Peak SAR Separation Distance (mm)		
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3
NR Band n5+ LTE 66+2.4GHz MIMO RSDB		5GHz MIMO RSDB		1.767			149.399	
NR Band n5+ LTE 25(2)+2.4GHz MIMO RSDB				1.522			149.399	
NR Band n66 + 2.4GHz MIMO RSDB	Sub 1 ANT LTE 2 (only EN-DC)		1.623	1.503	0.617	297.168	117.968	297.168
NR Band n66 + LTE 5 + 2.4GHz MIMO RSDB				1.575			117.972	
NR Band n66 + LTE 12 + 2.4GHz MIMO RSDB				1.506			117.972	
NR Band n66 + LTE 13 + 2.4GHz MIMO RSDB				1.575			117.972	
NR Band n5+ LTE 66+2.4GHz MIMO RSDB		6GHz MIMO RSDB		1.924			156.712	
NR Band n5+ LTE 25(2)+2.4GHz MIMO RSDB				1.679			156.712	
NR Band n66 + 2.4GHz MIMO RSDB	Sub 1 ANT LTE 2 (only EN-DC)		1.623	1.660	0.774	297.168	120.322	297.168
NR n66 + LTE 5 + 2.4GHz MIMO RSDB				1.732			120.323	
NR Band n66 + LTE 12 + 2.4GHz MIMO RSDB				1.663			120.323	
NR Band n66 + LTE 13 + 2.4GHz MIMO RSDB				1.732			120.323	

Band			SPLSR			Plot No.	
1	2	3	1+2	1+3	2+3		
NR Band n5+ LTE 66+2.4GHz MIMO RSDB		5GHz MIMO RSDB		0.0157		#11	
NR Band n5+ LTE 25(2)+2.4GHz MIMO RSDB				0.0126		#12	
NR Band n66 + 2.4GHz MIMO RSDB	Sub 1 ANT LTE 2 (only EN-DC)			0.0070	0.0156	0.0016	#13
NR Band n66 + LTE 5 + 2.4GHz MIMO RSDB					0.0168		#14
NR Band n66 + LTE 12 + 2.4GHz MIMO RSDB					0.0157		#15
NR Band n66 + LTE 13 + 2.4GHz MIMO RSDB					0.0168		#16
NR Band n5+ LTE 66+2.4GHz MIMO RSDB		6GHz MIMO RSDB		0.0170		#17	
NR Band n5+ LTE 25(2)+2.4GHz MIMO RSDB				0.0139		#18	
NR Band n66 + 2.4GHz MIMO RSDB	Sub 1 ANT LTE 2 (only EN-DC)			0.0070	0.0178	0.0023	#19
NR Band n66 + LTE 5 + 2.4GHz MIMO RSDB					0.0189		#20
NR Band n66 + LTE 12 + 2.4GHz MIMO RSDB					0.0178		#21
NR Band n66 + LTE 13 + 2.4GHz MIMO RSDB					0.0189		#22

Band			∑ 1-g SAR (W/kg)			Peak SAR Separation Distance (mm)			SPLSR			Plot No.
			1+2	1+3	2+3	1+2	1+3	2+3	1+2	1+3	2+3	
GSM 850	BT Ant 1	2.4GHz ANT 2 RSDB + 5GHz MIMO RSDB	1.160	0.912	1.068	70.129	103.385	171.889	0.018	0.008	0.006	#23
GMS1900			1.685	1.437	1.068	55.106	118.111	171.889	0.040	0.015	0.006	#24
UMTS Band 5			1.176	0.928	1.068	96.757	76.448	171.889	0.013	0.012	0.006	#25
LTE Band 12			1.341	1.093	1.068	68.447	104.690	171.889	0.023	0.011	0.006	#26
LTE Band 13			1.400	1.152	1.068	69.933	103.200	171.889	0.024	0.012	0.006	#27
LTE Band 25(2)			1.356	1.108	1.068	54.898	117.968	171.889	0.029	0.010	0.006	#28
LTE Band 26			1.197	0.949	1.068	69.933	103.200	171.889	0.019	0.009	0.006	#29
LTE 41			1.439	1.191	1.068	58.999	113.159	171.889	0.029	0.011	0.006	#30
LTE Band 66(4)			1.876	1.628	1.068	65.302	107.514	171.889	0.039	0.019	0.006	#31
GSM 850			1.160	0.919	1.075	70.129	105.433	174.711	0.018	0.008	0.006	#32
GMS1900			1.685	1.444	1.075	55.106	120.360	174.711	0.040	0.014	0.006	#33
UMTS Band 5		1.176	0.935	1.075	96.757	78.392	174.711	0.013	0.012	0.006	#34	
LTE Band 12		1.341	1.100	1.075	68.447	106.868	174.711	0.023	0.011	0.006	#35	
LTE Band 13		1.400	1.159	1.075	69.933	105.369	174.711	0.024	0.012	0.006	#36	
LTE Band 25(2)		1.356	1.115	1.075	54.898	120.322	174.711	0.029	0.010	0.006	#37	
LTE Band 26		1.197	0.956	1.075	69.933	105.369	174.711	0.019	0.009	0.006	#38	
LTE 41		1.439	1.198	1.075	58.999	115.821	174.711	0.029	0.011	0.006	#39	
LTE Band 66(4)		1.876	1.635	1.075	65.302	109.824	174.711	0.039	0.019	0.006	#40	

Band		∑ 1-g SAR (W/kg)	Peak SAR Separation Distance (mm)	SPLSR	Plot No.
1	2	1+2	1+2	1+2	
UMTS Band 4 + BT Ant1	2.4GHz ANT 2 RSDB	1.314	117.968	0.013	#41
UMTS Band 2 +BT Ant1	+ 5GHz MIMO RSDB	0.905	119.462	0.007	#42
UMTS Band 4 + BT Ant1		1.321	120.322	0.013	#43

UMTS Band 2 +BT Ant1	2.4GHz ANT 2 RSDB + 6GHz MIMO RSDB	0.912	121.822	0.007	#44
----------------------	---------------------------------------	-------	---------	-------	-----

Band		$\Sigma$ 1-g SAR (W/kg)	Peak SAR Separation Distance (mm)	SPLSR	Plot No.	
1	3	1+2	1+2	1+2		
GSM 850	BT Ant2 + 5GHz MIMO	1.426	103.385	0.0165	#45	
GMS1900		1.951	118.111	0.0231	#46	
UMTS Band 5		1.442	76.448	0.0227	#47	
UMTS Band 4		2.175	117.968	0.0272	#48	
UMTS Band 2		2.053	119.462	0.0246	#49	
LTE Band 12		1.607	104.690	0.0195	#50	
LTE Band 13		1.666	103.200	0.0208	#51	
LTE Band 25(2)		1.622	117.968	0.0175	#52	
LTE Band 26		1.463	103.200	0.0171	#53	
LTE 41		1.705	113.159	0.0197	#54	
LTE Band 66(4)		2.142	107.514	0.0292	#55	
GSM 850		BT Ant2 + 6GHz MIMO	1.398	105.433	0.0157	#56
GMS1900			1.923	120.360	0.0222	#57
UMTS Band 5	1.414		78.392	0.0214	#58	
UMTS Band 4	2.147		120.322	0.0261	#59	
UMTS Band 2	2.025		121.822	0.0237	#60	
LTE Band 12	1.579		106.868	0.0186	#61	
LTE Band 13	1.638		105.369	0.0199	#62	
LTE Band 25(2)	1.594		120.322	0.0167	#63	
LTE Band 26	1.463		105.369	0.0168	#64	
LTE 41	1.677		115.821	0.0188	#65	
LTE Band 66(4)	2.114		109.824	0.0280	#66	

Band			Σ 1-g SAR (W/kg)			Peak SAR Separation Distance (mm)		
1	2	3	1+2	1+3	2+3	1+2	1+3	2+3
NR n5 + LTE 66		BT Ant2 RSDB + 5GHz MIMO RSDB		1.475			107.514	
NR n66 + LTE 25(2)				1.231			117.968	
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)		1.930	1.538	1.082	297.208	117.972	306.004
NR Band n66 + LTE 26(5)				1.285			117.972	
NR Band n66 + LTE 12				0.993			117.972	
NR Band n66 + LTE 13				1.334			117.972	
NR n5 + LTE 66		BT Ant2 RSDB + 6GHz MIMO RSDB		1.583			109.824	
NR n66 + LTE 25(2)				1.339			120.322	
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)		1.930	1.646	1.190	297.208	120.323	314.665
NR Band n66 + LTE 26(5)				1.393			120.323	
NR Band n66 + LTE 12				1.101			120.323	
NR Band n66 + LTE 13				1.442			120.323	

Band			SPLSR			Plot No.	
1	2	3	1+2	1+3	2+3		
NR n5 + LTE 66		BT Ant2 RSDB + 5GHz MIMO RSDB		0.017		#67	
NR n66 + LTE 25(2)					0.012		#68
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)		0.009	0.016	0.004		#69
NR Band n66 + LTE 26(5)					0.012		#70
NR Band n66 + LTE 12					0.008		#71
NR Band n66 + LTE 13					0.013		#72
NR n5 + LTE 66		BT Ant2 RSDB + 6GHz MIMO RSDB		0.018		#73	
NR n66 + LTE 25(2)					0.013		#74
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)		0.009	0.018	0.004		#75
NR Band n66 + LTE 26(5)					0.014		#76
NR Band n66 + LTE 12					0.010		#77
NR Band n66 + LTE 13					0.014		#78

Band				Σ 1-g SAR (W/kg)						
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	
NR n5 + LTE 66		BT Ant1 RSDB	2.4GHz Ant2 RSDB + 5GHz MIMO RSDB		1.585	1.462			0.787	
NR n5 + LTE 25(2)					1.341	1.218				0.787
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.648	1.525	1.192	1.069		0.787
NR Band n66 + LTE 26(5)					1.395	1.272				0.787
NR Band n66 +LTE 12					1.103	0.980				0.787
NR Band n66 + LTE 13					1.444	1.321				0.787
NR n5 + LTE 66			2.4GHz Ant2 RSDB + 6GHz MIMO RSDB		1.585	1.547				0.872
NR n5 + LTE 25(2)					1.341	1.303				0.872
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			1.930	1.648	1.610	1.192	1.154		0.872
NR Band n66 + LTE 26(5)					1.395	1.357				0.872
NR Band n66 +LTE 12					1.103	1.065				0.872
NR Band n66 + LTE 13					1.444	1.406				0.872

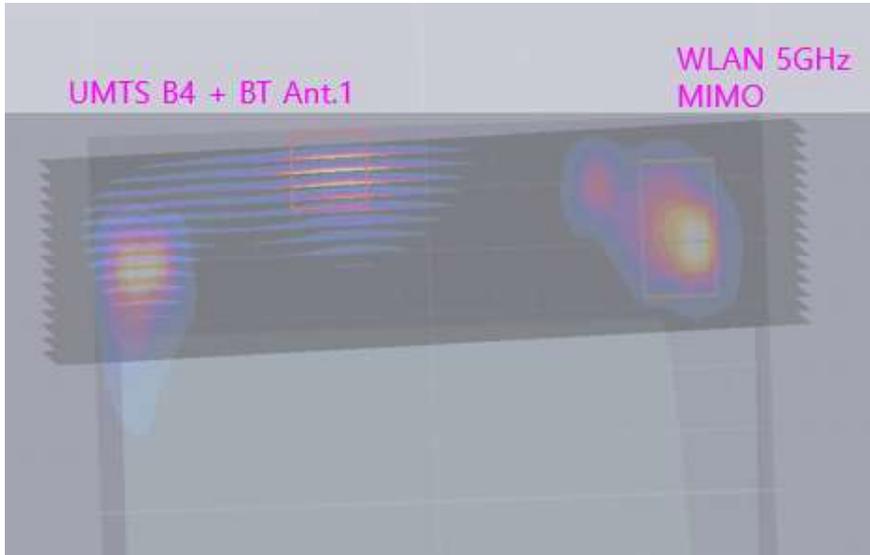
Band				Peak SAR Separation Distance (mm)						
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4	
NR n5 + LTE 66		BT Ant1 RSDB	2.4GHz Ant2 RSDB + 5GHz MIMO RSDB		65.302	107.514			171.889	
NR n5 + LTE 25(2)					54.898	117.968				171.889
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			297.208	297.170	117.972	297.170	306.004		171.889
NR Band n66 + LTE 26(5)					54.903	117.972				171.889
NR Band n66 +LTE 12					54.903	117.972				171.889
NR Band n66 + LTE 13					54.903	117.972				171.889
NR n5 + LTE 66			2.4GHz Ant2 RSDB + 6GHz MIMO RSDB		65.302	109.824				171.889
NR n5 + LTE 25(2)					54.898	120.322				171.889
NR Band n66	Sub 1 ANT LTE 2 (only EN-DC)			297.208	297.170	120.323	297.170	314.665		171.889
NR Band n66 + LTE 26(5)					54.903	120.323				171.889
NR Band n66 +LTE 12					54.903	120.323				171.889
NR Band n66 + LTE 13					54.903	120.323				171.889

Band				SPLSR						Plot No.		
1	2	3	4	1+2	1+3	1+4	2+3	2+4	3+4			
NR n5 + LTE 66		BT Ant1 RSDB	2.4GHz Ant2 RSDB + 5GHz MIMO RSDB		0.031	0.016			0.004	#79		
NR n66 + LTE 25(2)						0.028	0.011			0.004	#80	
NR Band n66	Sub 1 ANT LTE 2 (only EN- DC)					0.009	0.007	0.016	0.004	0.004	0.004	#81
NR Band n66 + LTE 26(5)							0.030	0.012			0.004	#82
NR Band n66 +LTE 12							0.021	0.008			0.004	#83
NR Band n66 + LTE 13							0.032	0.013			0.004	#84
NR n5 + LTE 66							0.031	0.018			0.005	#85
NR n66 + LTE 25(2)							0.028	0.012			0.005	#86
NR Band n66	Sub 1 ANT LTE 2 (only EN- DC)				2.4GHz Ant2 RSDB + 6GHz MIMO RSDB	0.009	0.007	0.017	0.004	0.004	0.005	#87
NR Band n66 + LTE 26(5)								0.030	0.013			0.005
NR Band n66 +LTE 12						0.021	0.009			0.005	#89	
NR Band n66 + LTE 13						0.032	0.014			0.005	#90	

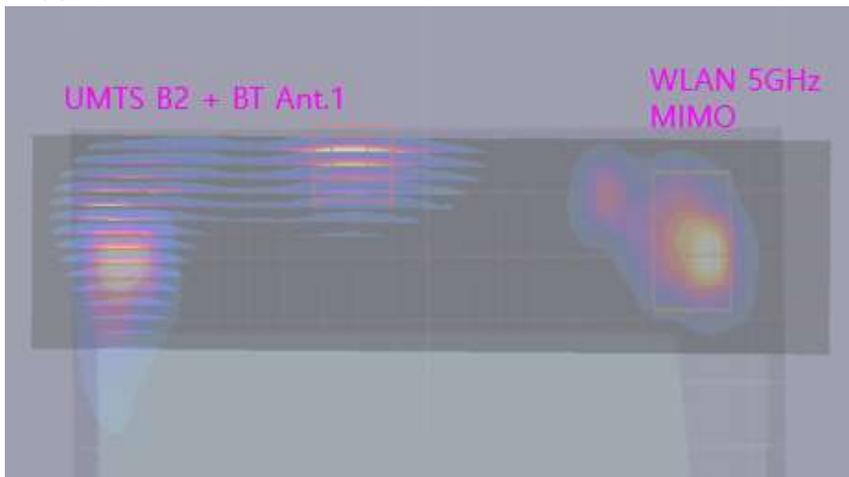
Band		$\sum$ 1-g SAR (W/kg)	Peak SAR Separation Distance (mm)	SPLSR	Plot No.
1	2	1+2	1+2	1+2	
UMTS Band 2 + BT Ant1	5GHz MIMO	1.235	95.000	0.014	#91
LTE Band 25(2) + BT Ant 1		1.386	95.000	0.017	#92
LTE Band 66(4) + BT Ant 1		1.466	95.000	0.019	#93
LTE Band 25(2) + BT Ant 1	6GHz MIMO	1.386	96.003	0.017	#94
LTE Band 66(4) + BT Ant 1		1.466	96.003	0.018	#95
LTE Band 25(2) + BT Ant 1	2.4GHz Ant2	1.386	126.000	0.013	#96
LTE Band 66(4) + BT Ant 1		1.466	126.000	0.014	#97

## 14.2.6 SPLSR Plot

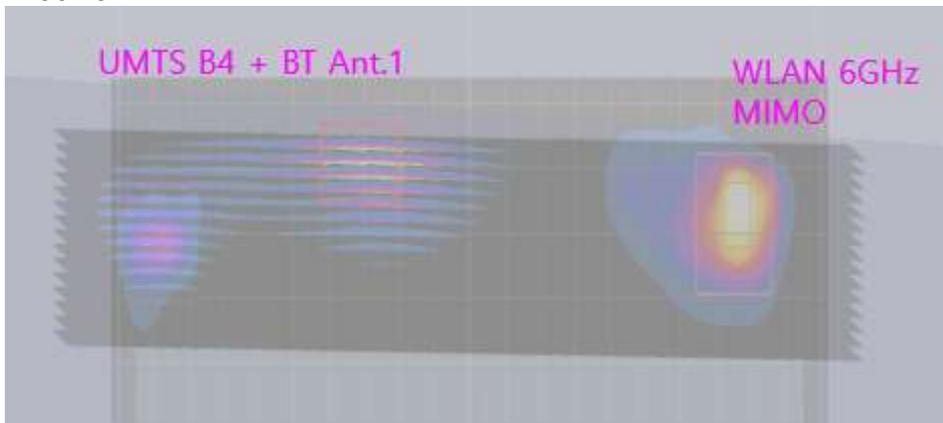
Plot #1



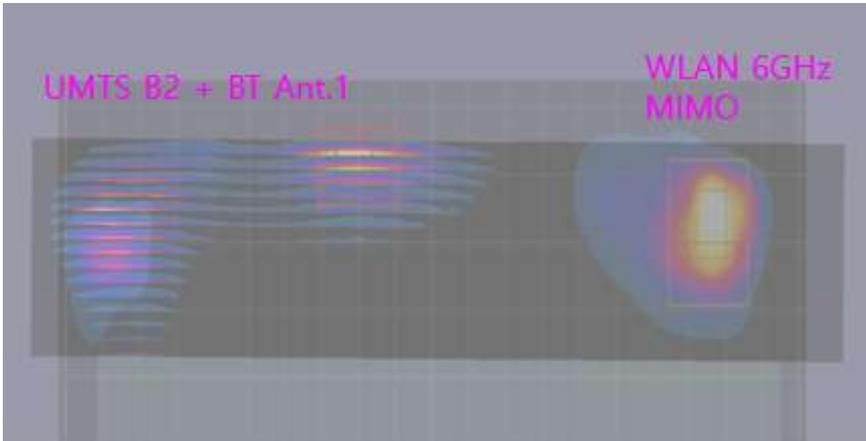
Plot #2



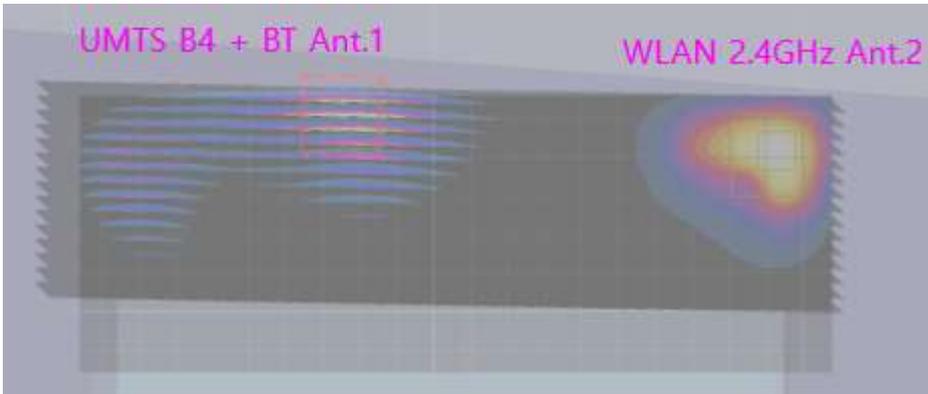
Plot #3



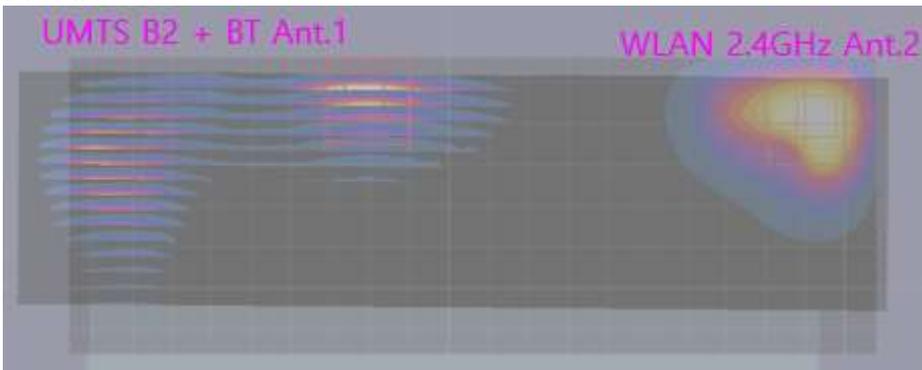
**Plot #4**



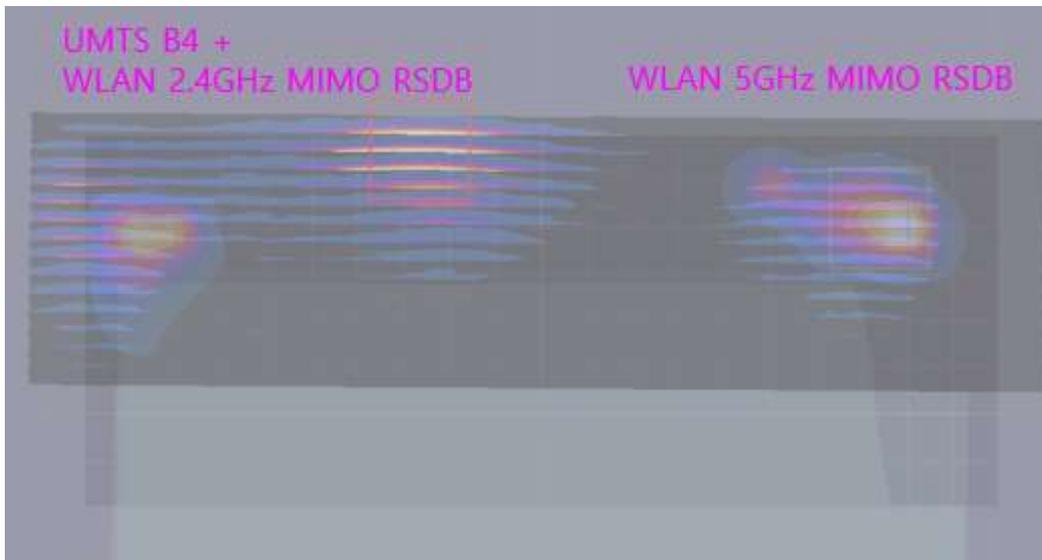
**Plot #5**



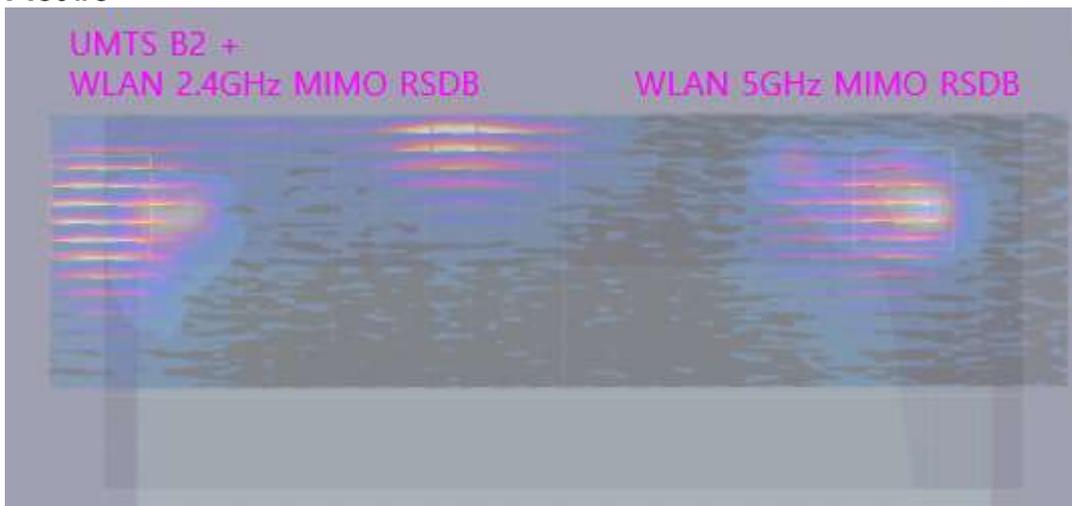
**Plot #6**



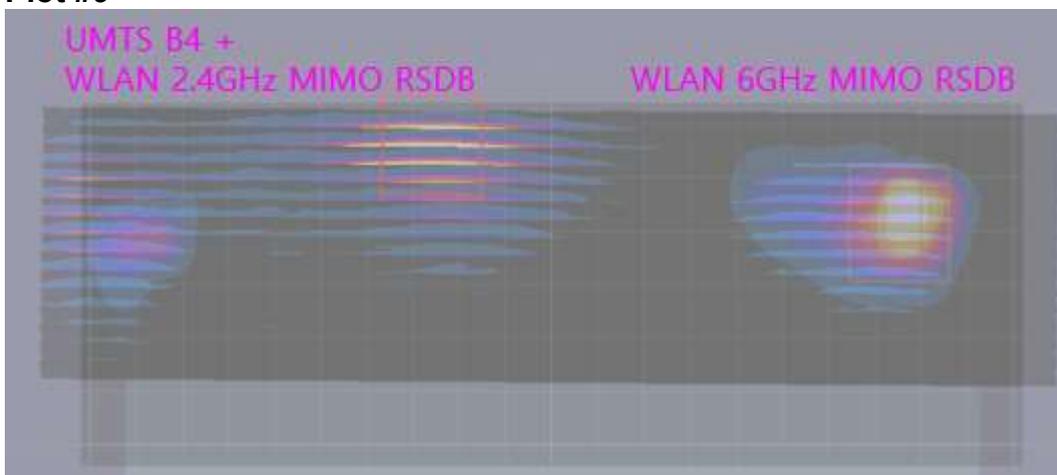
**Plot #7**



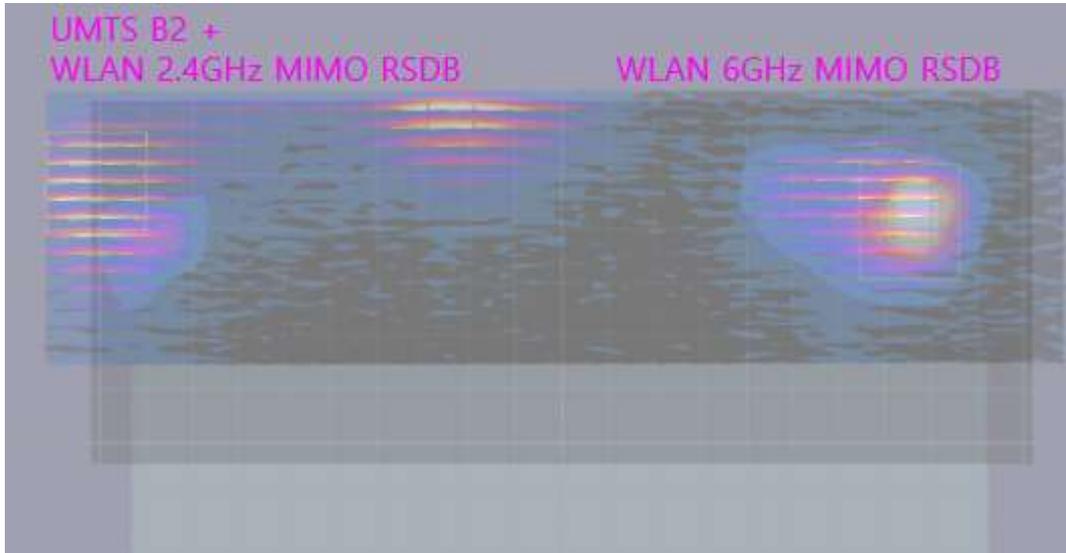
**Plot #8**



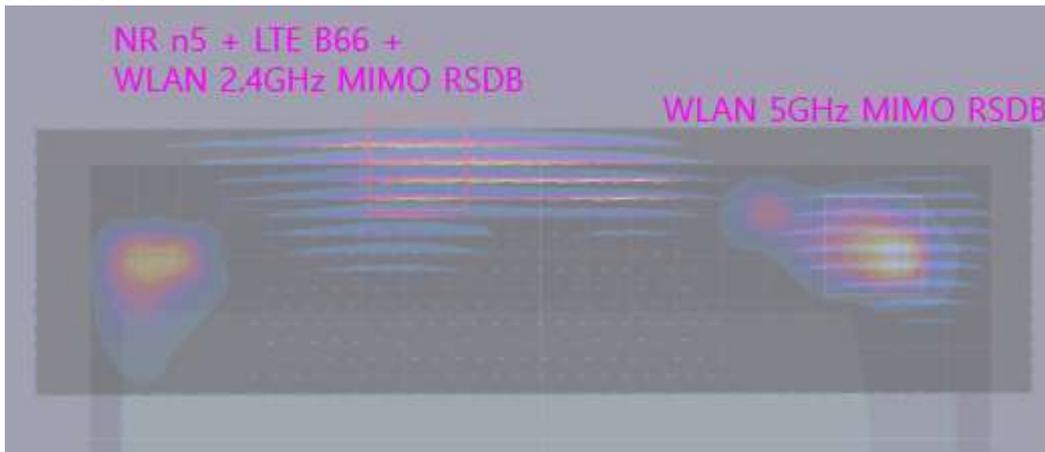
**Plot #9**



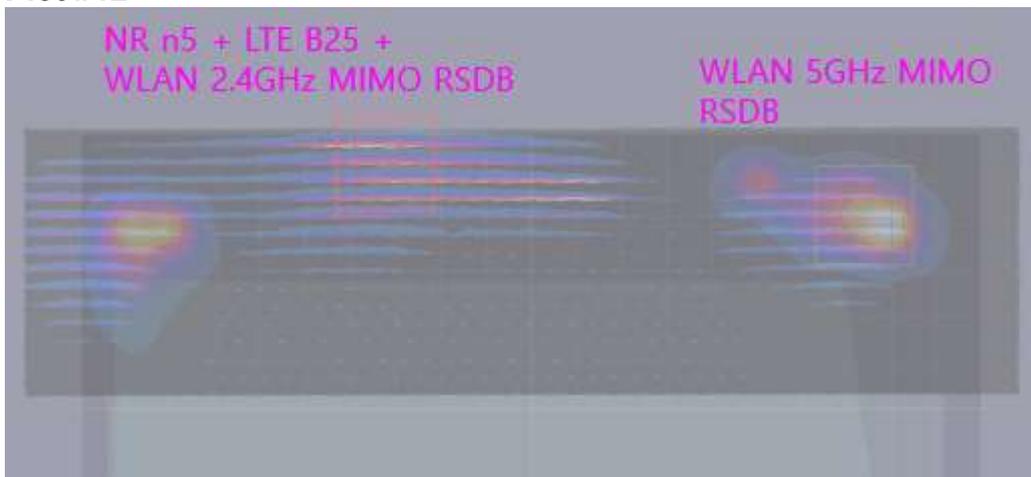
### Plot #10



### Plot #11



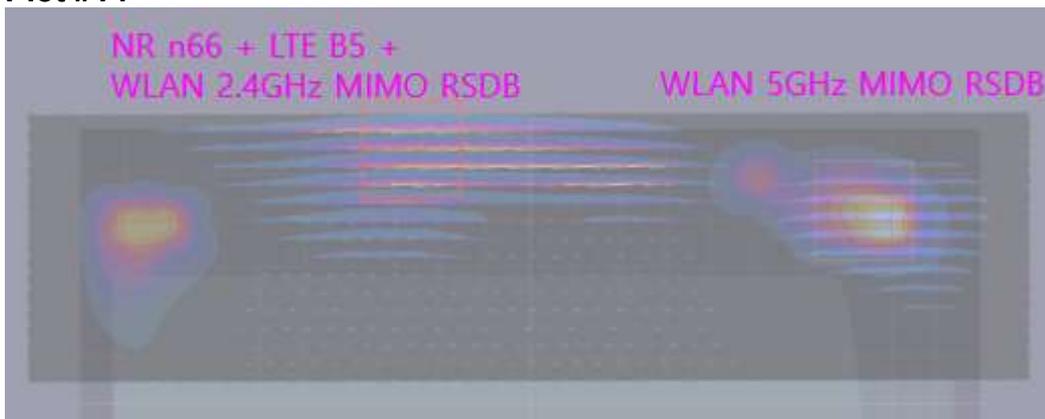
### Plot #12



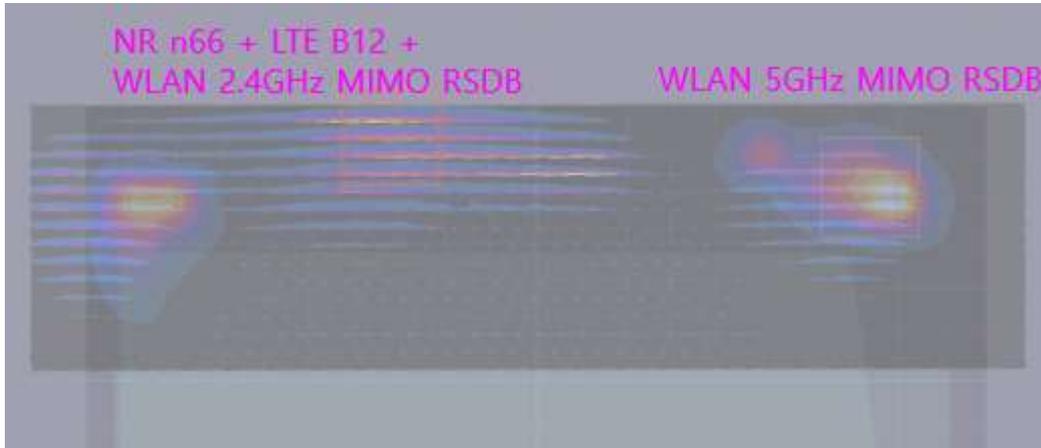
**Plot #13**



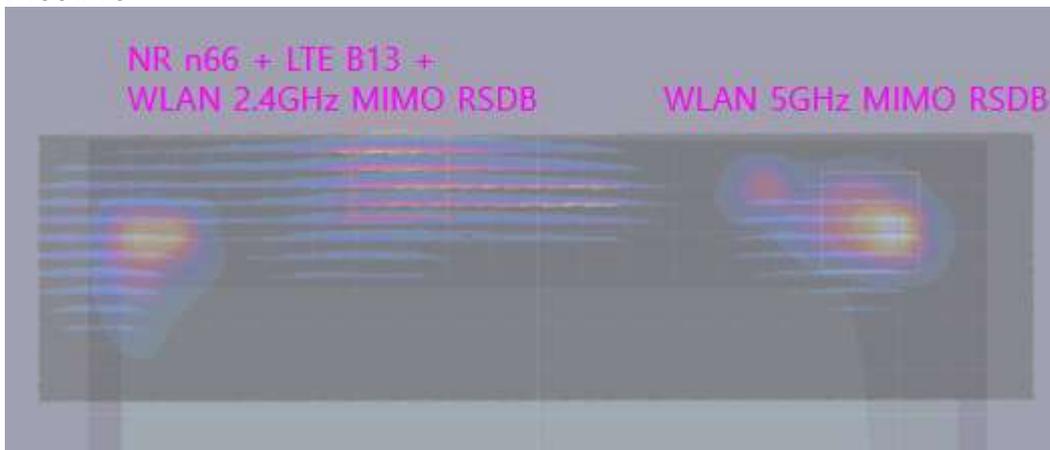
**Plot #14**



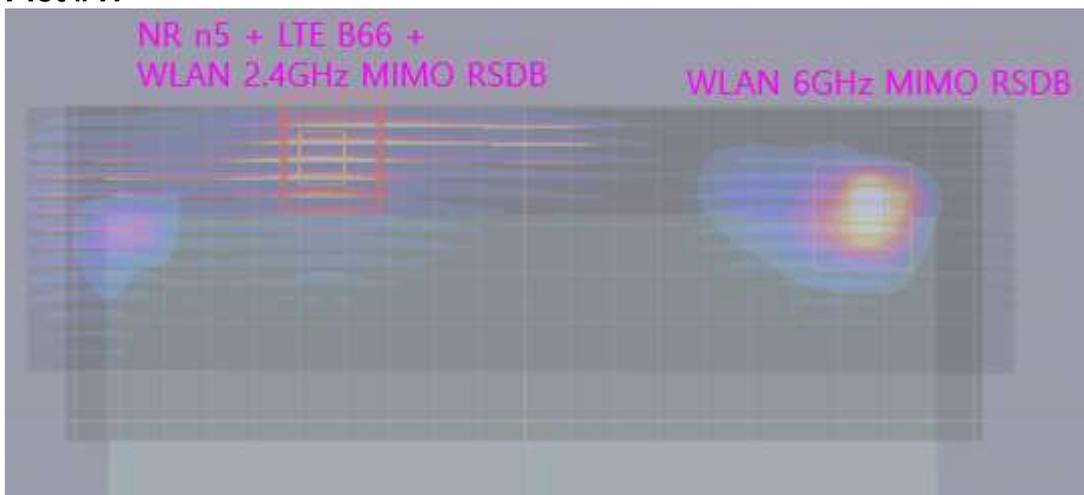
### Plot #15



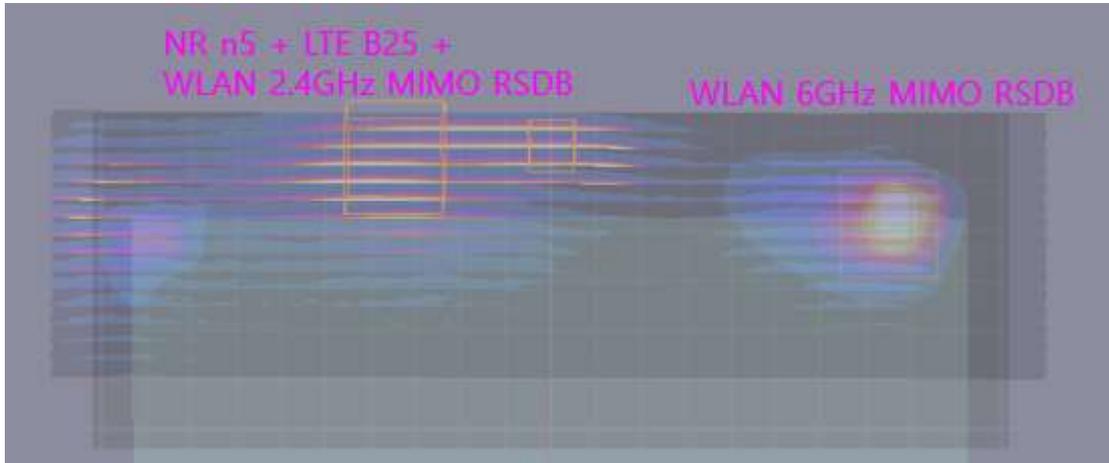
### Plot #16



### Plot #17



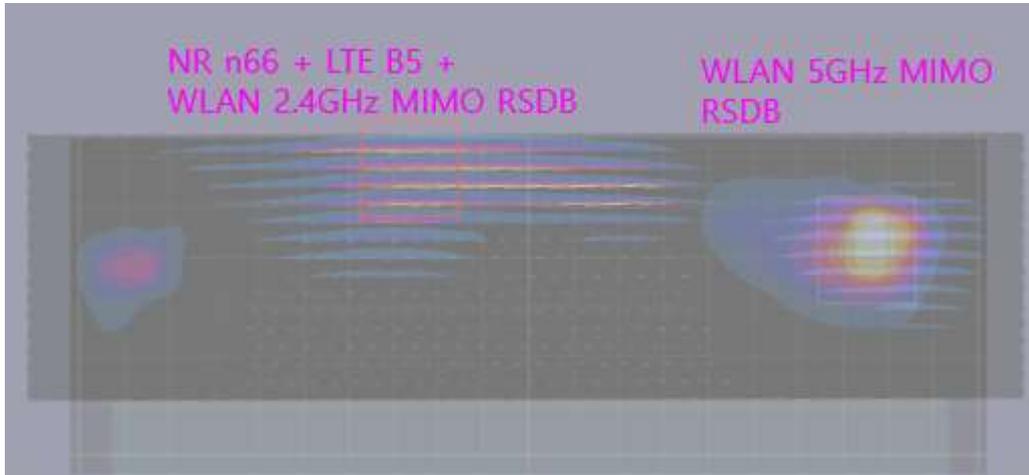
**Plot #18**



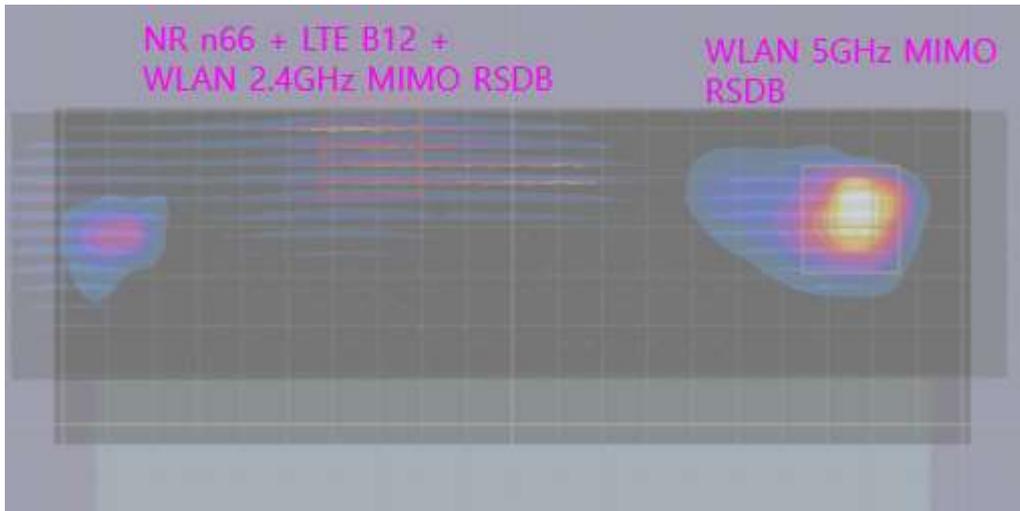
**Plot #19**



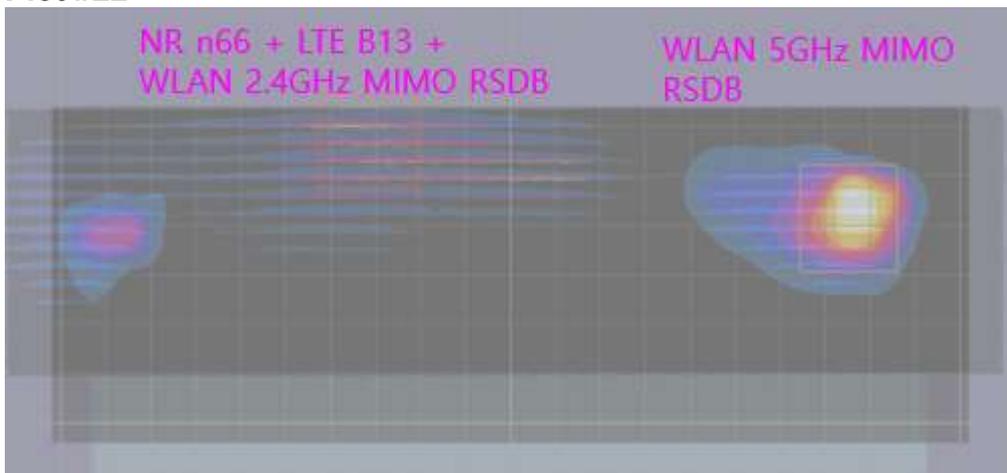
**Plot #20**



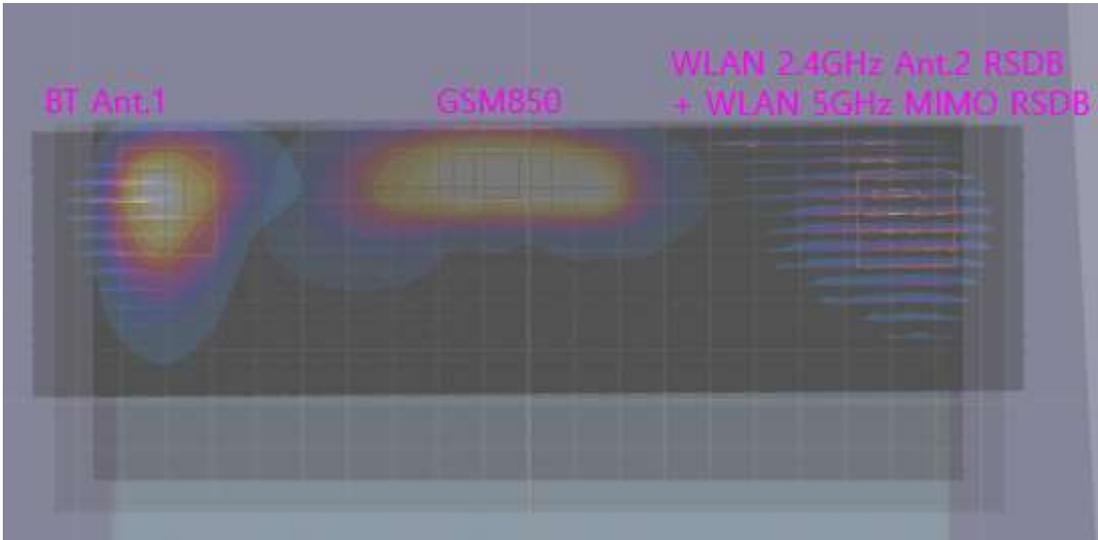
**Plot #21**



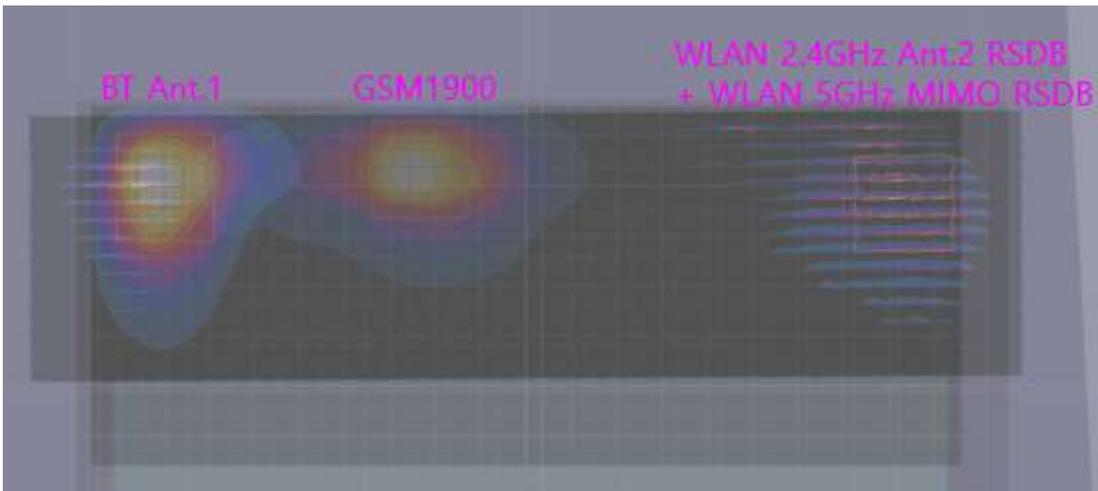
**Plot #22**



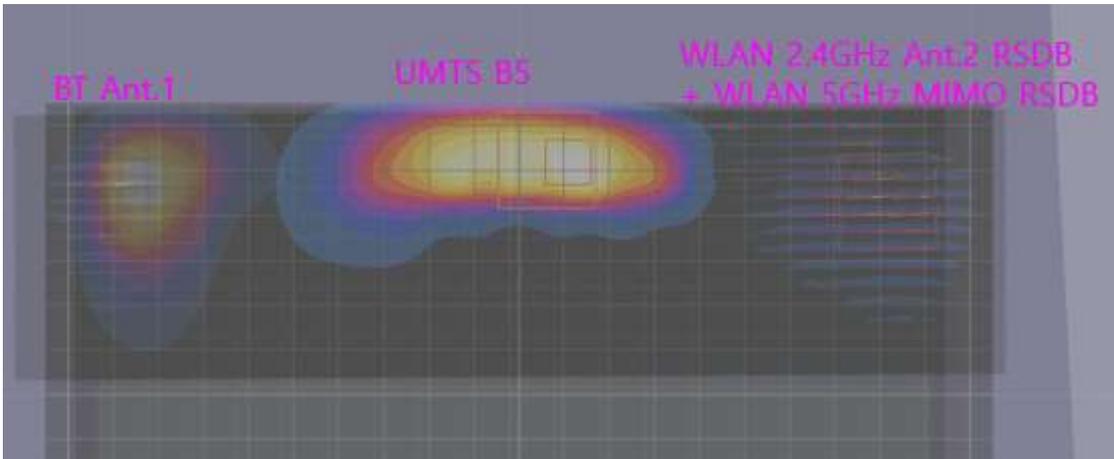
**Plot #23**



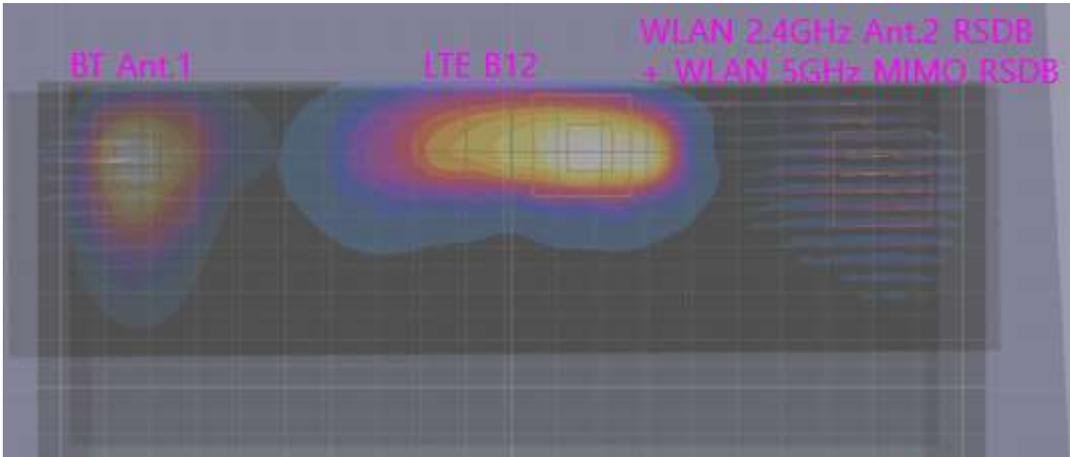
**Plot #24**



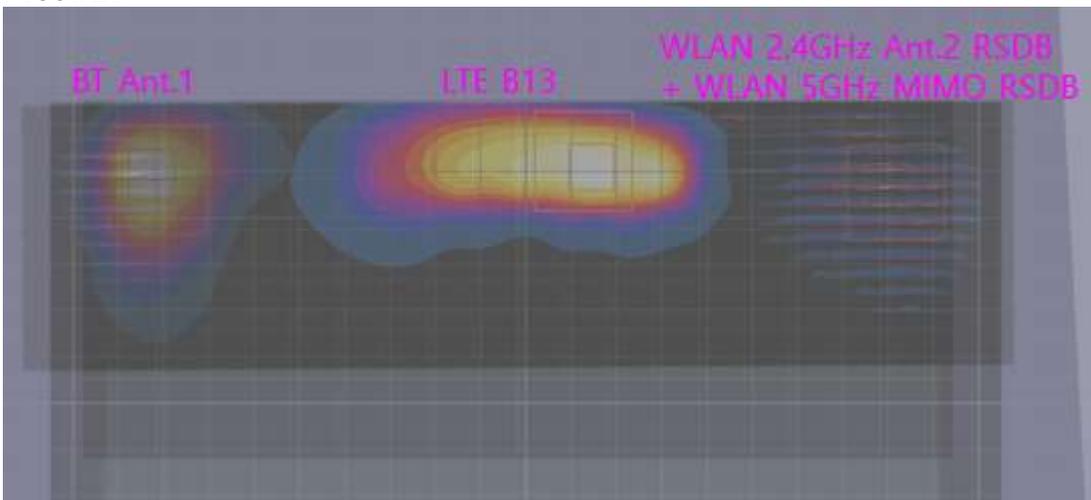
**Plot #25**



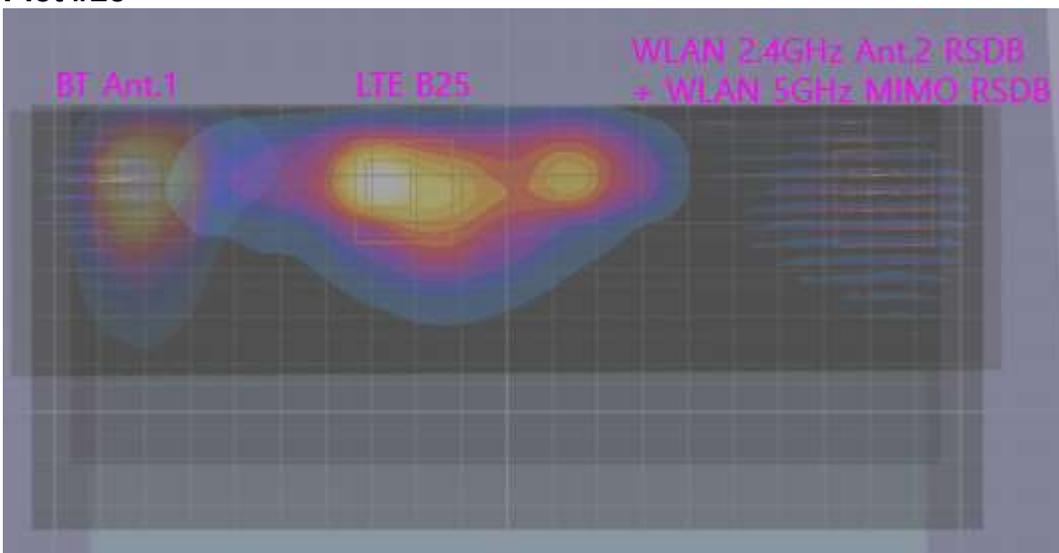
**Plot #26**



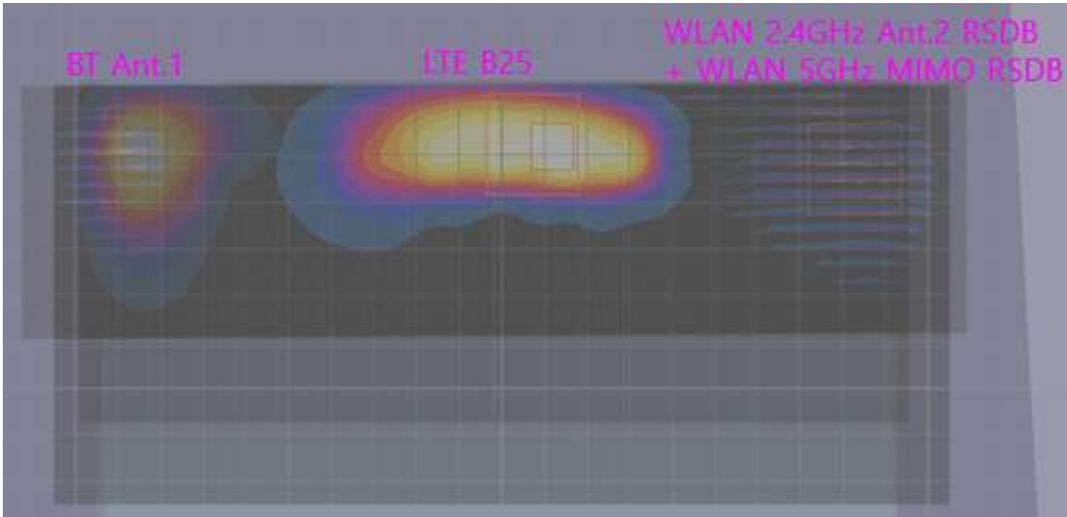
**Plot #27**



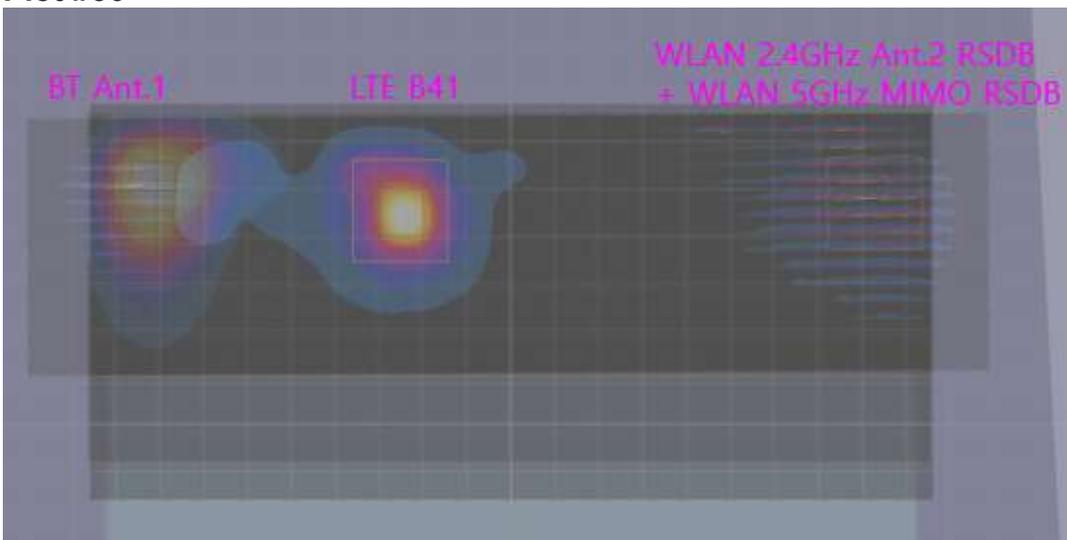
**Plot #28**



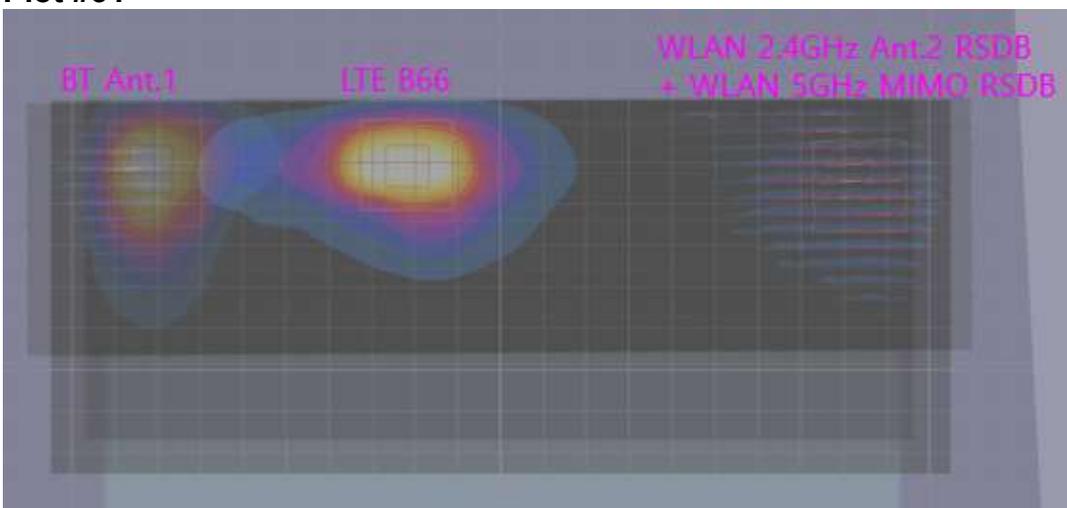
**Plot #29**



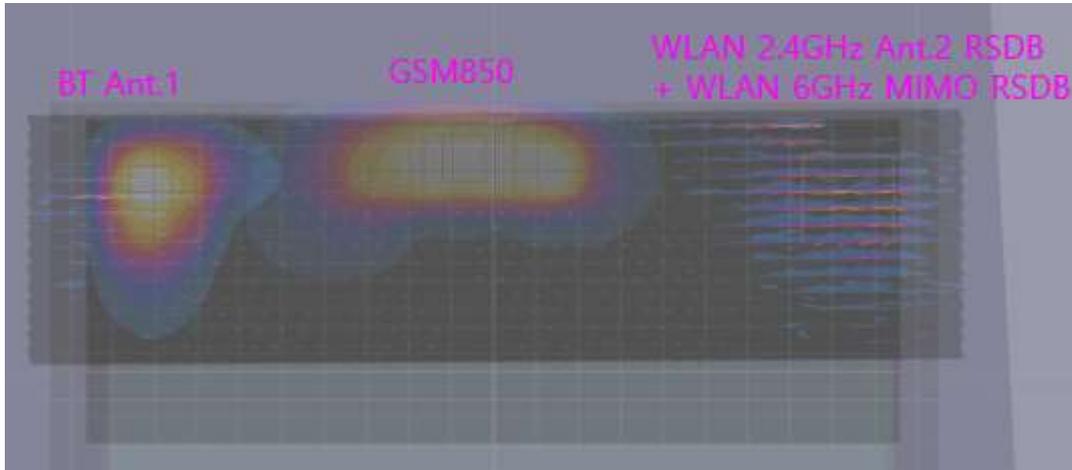
**Plot #30**



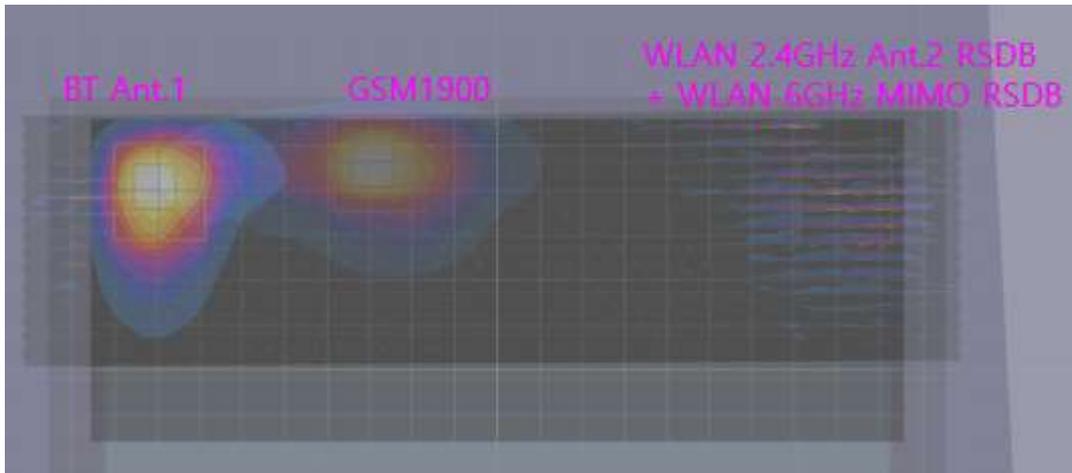
**Plot #31**



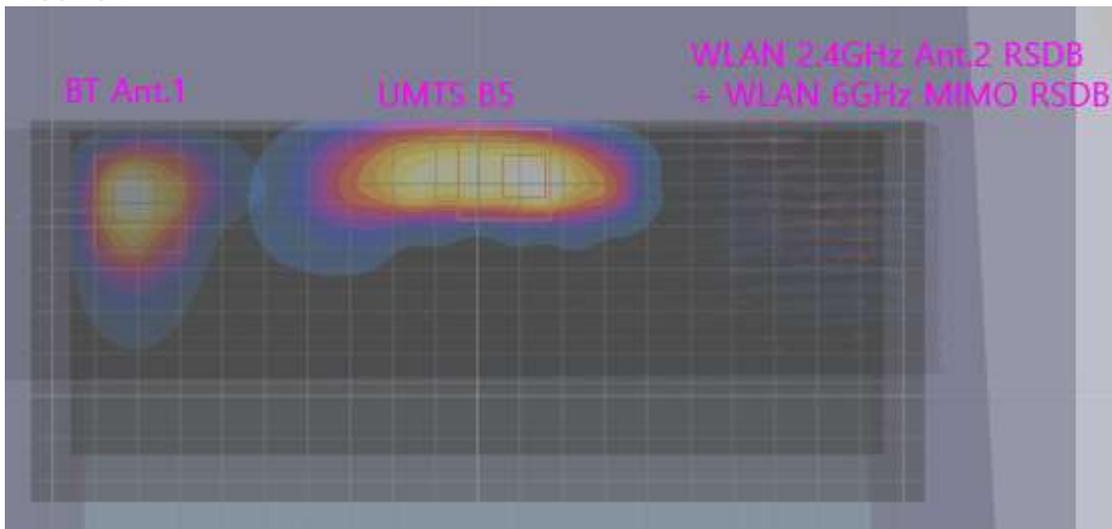
**Plot #32**



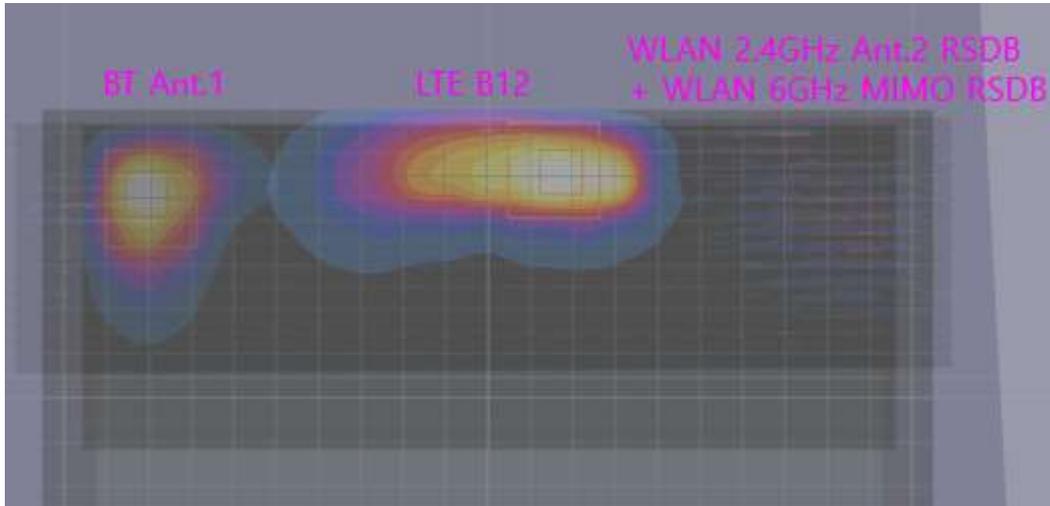
**Plot #33**



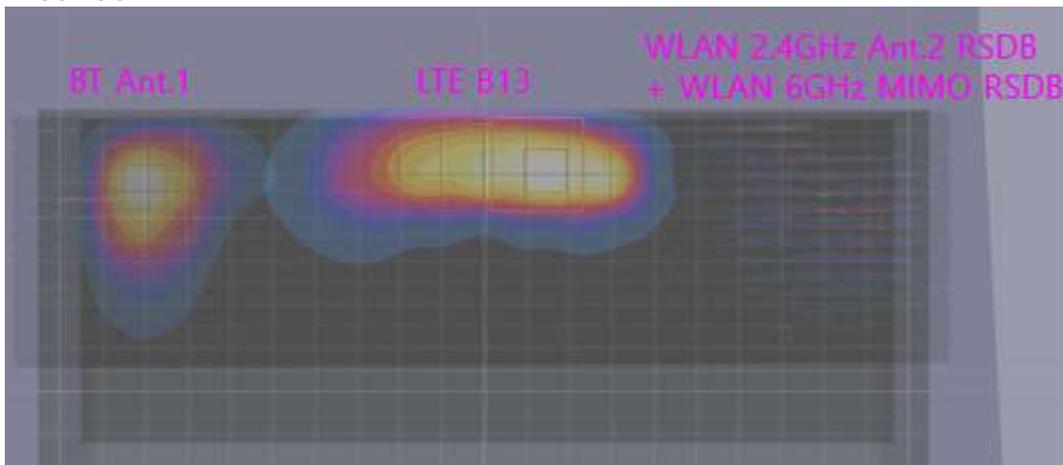
**Plot #34**



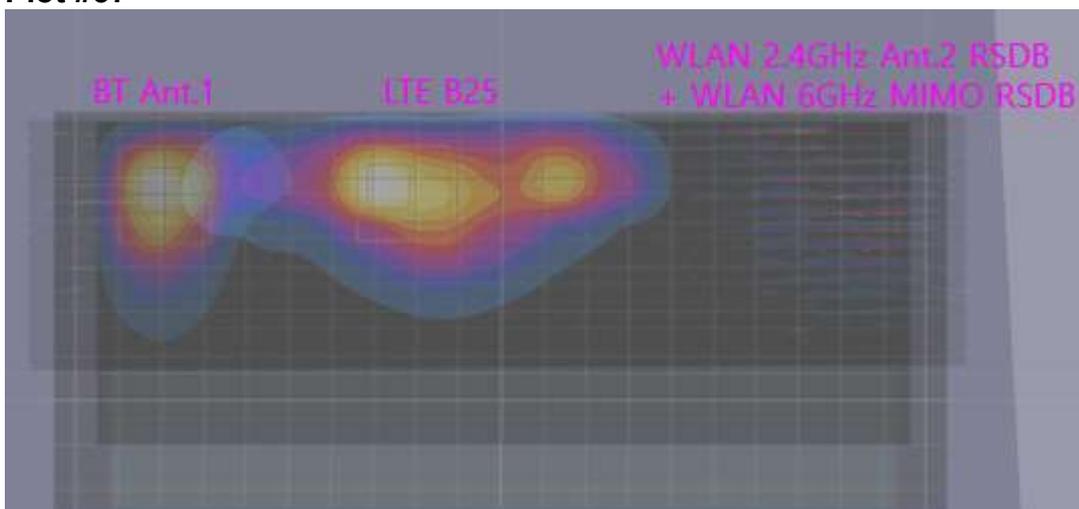
**Plot #35**



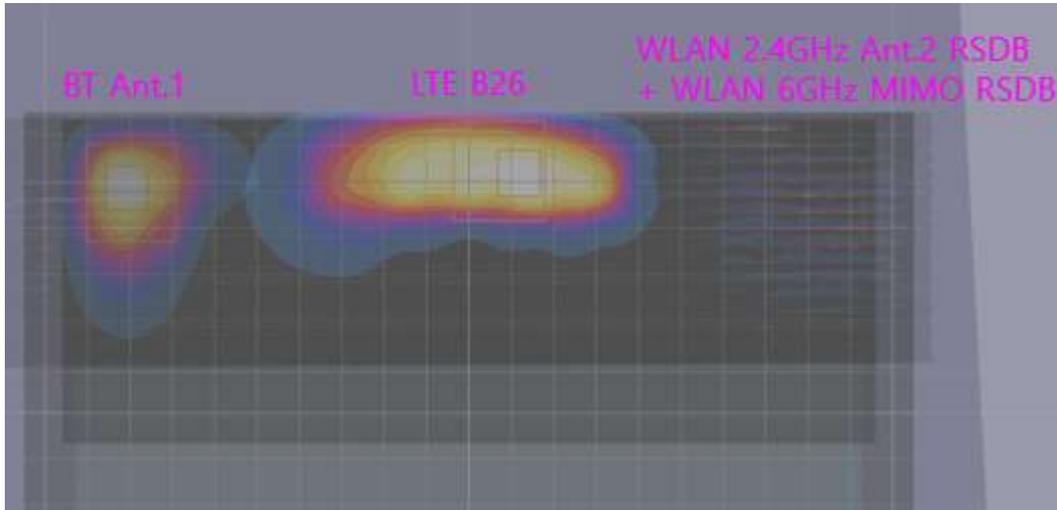
**Plot #36**



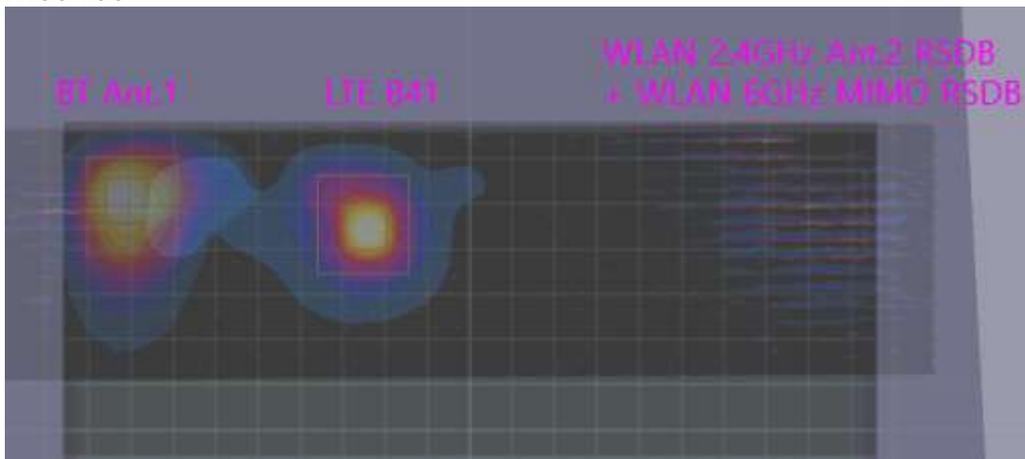
**Plot #37**



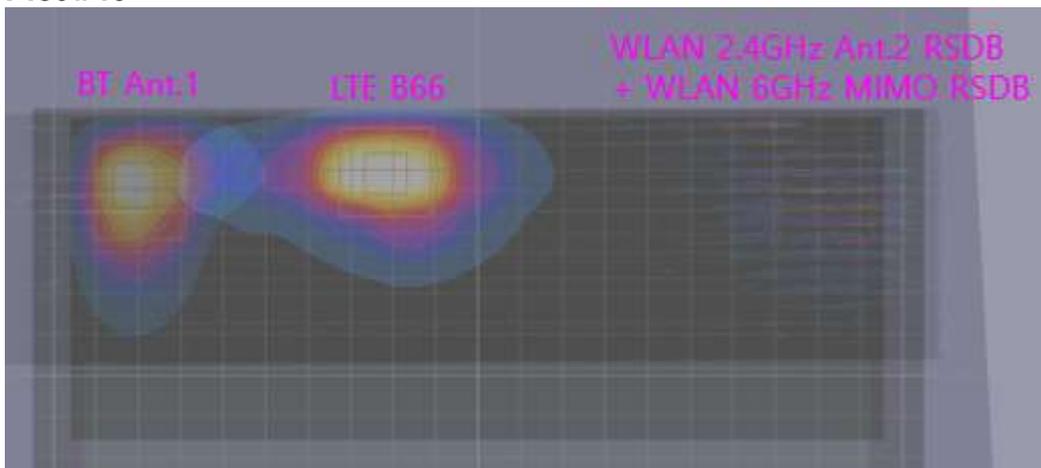
Plot #38



Plot #39



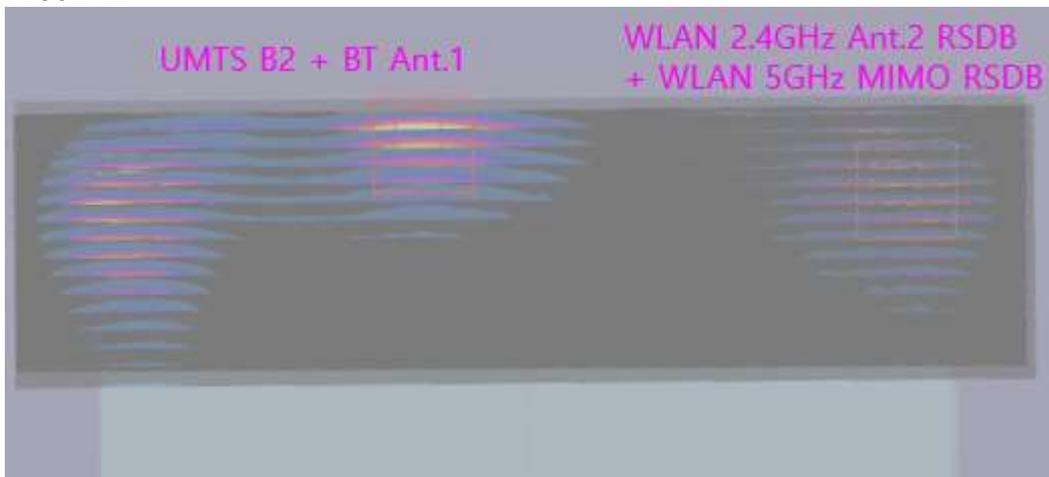
Plot #40



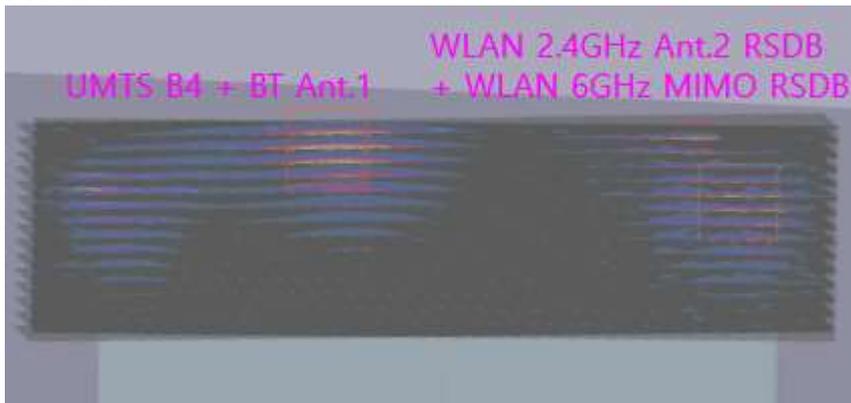
**Plot #41**



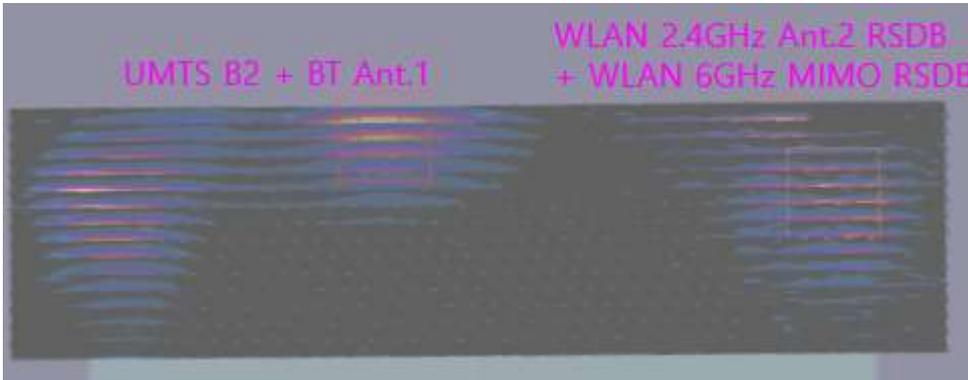
**Plot #42**



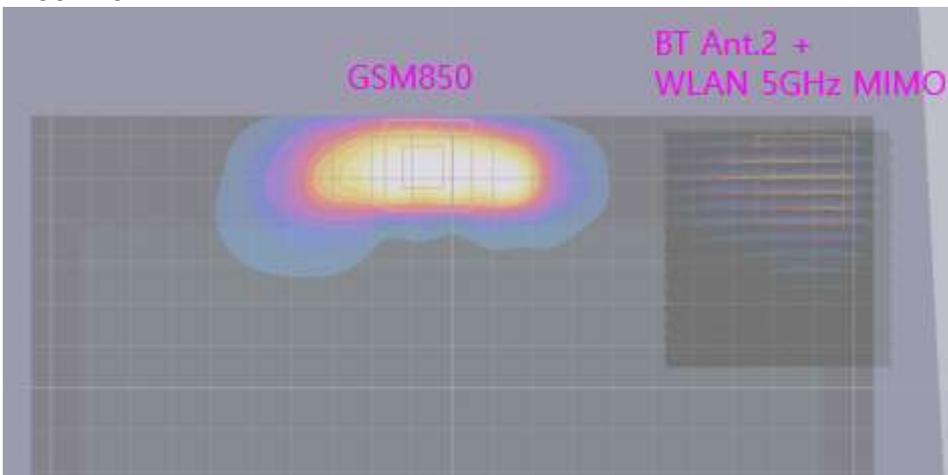
**Plot #43**



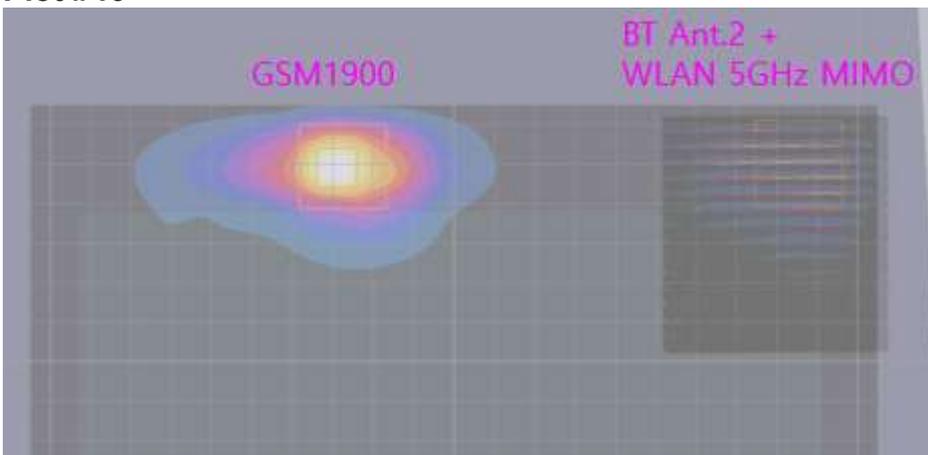
**Plot #44**



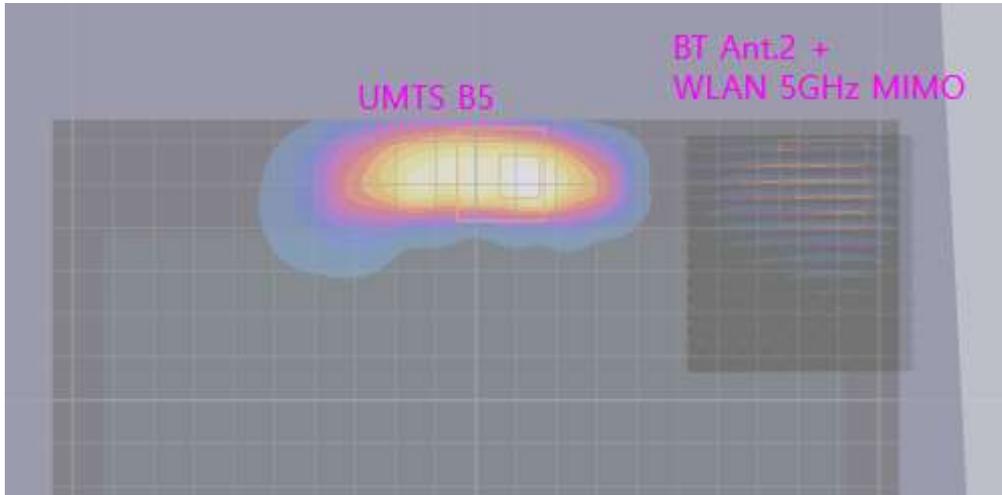
**Plot #45**



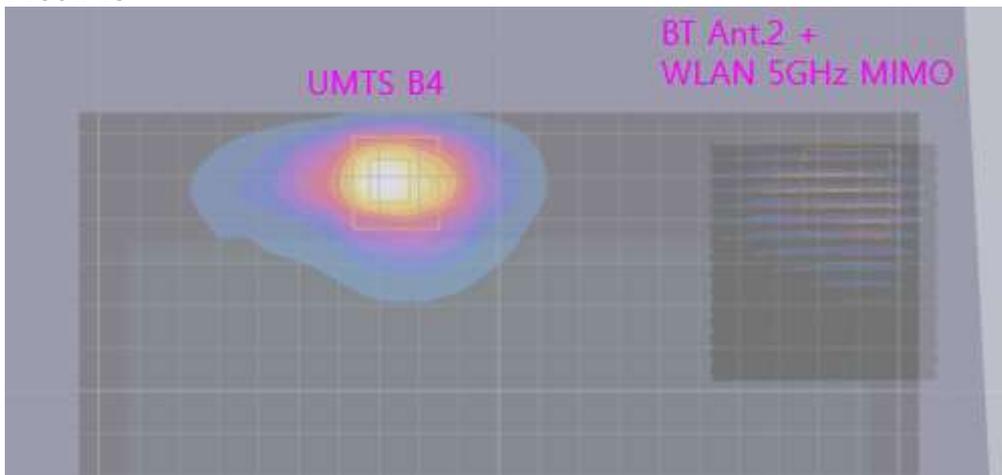
**Plot #46**



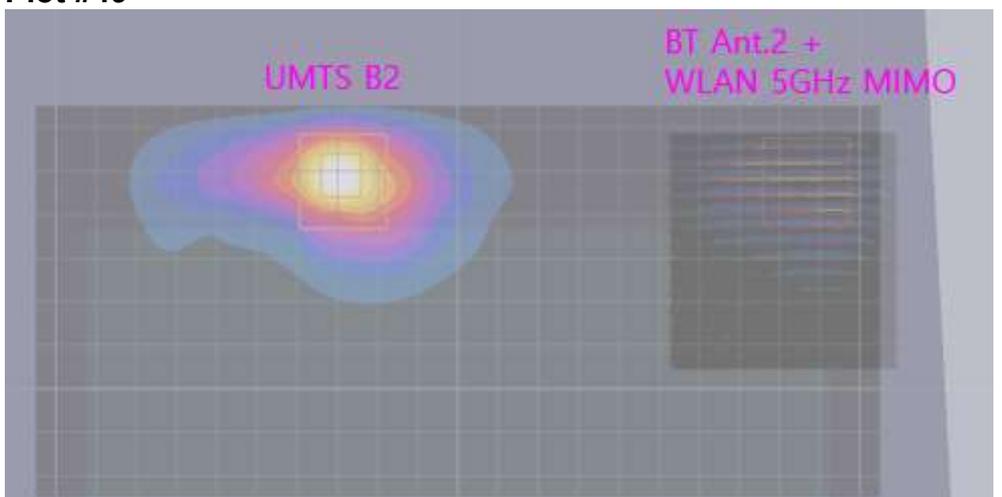
**Plot #47**



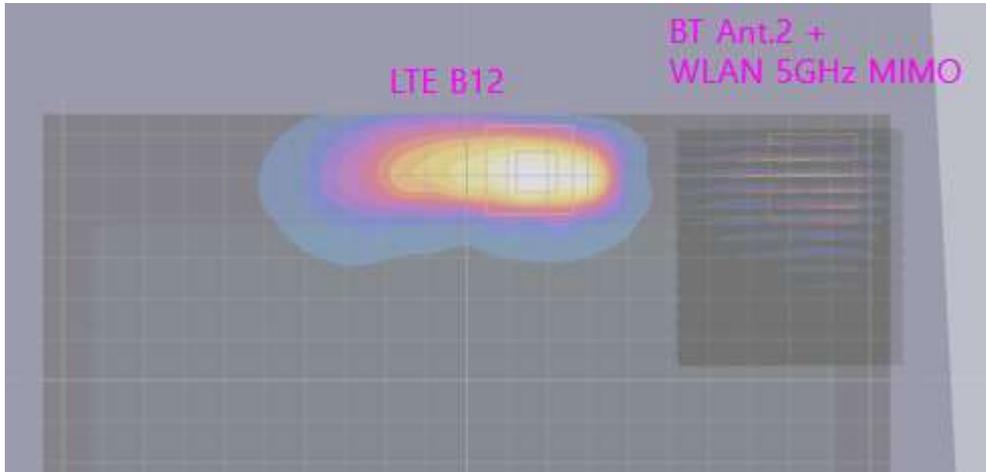
**Plot #48**



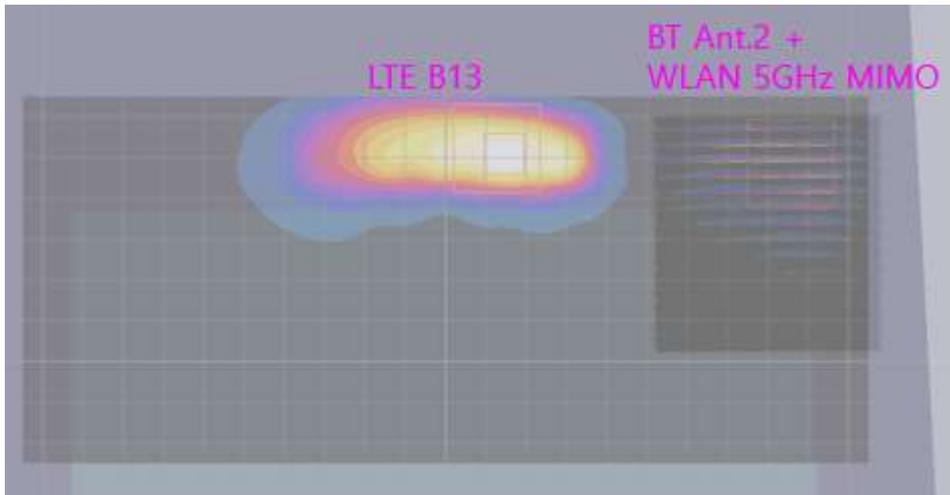
**Plot #49**



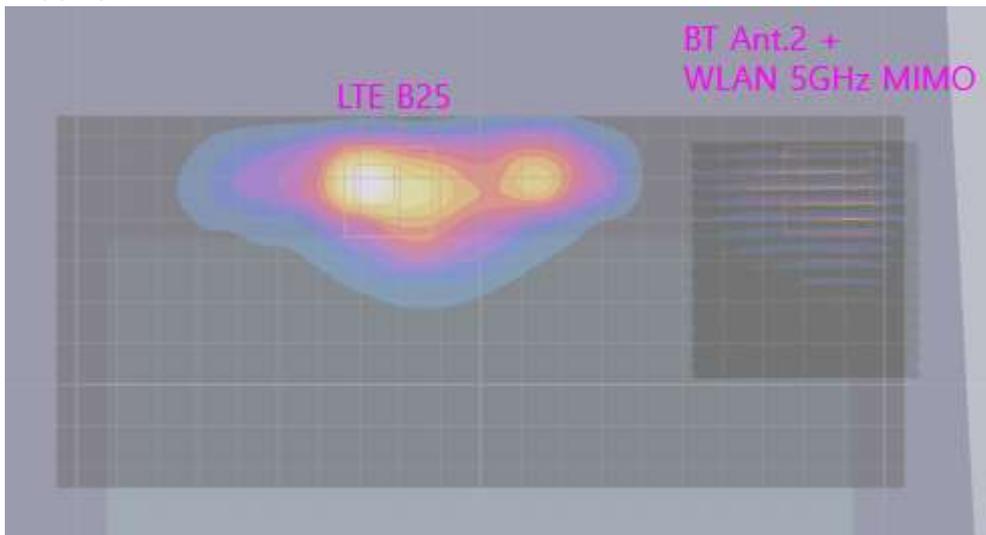
**Plot #50**



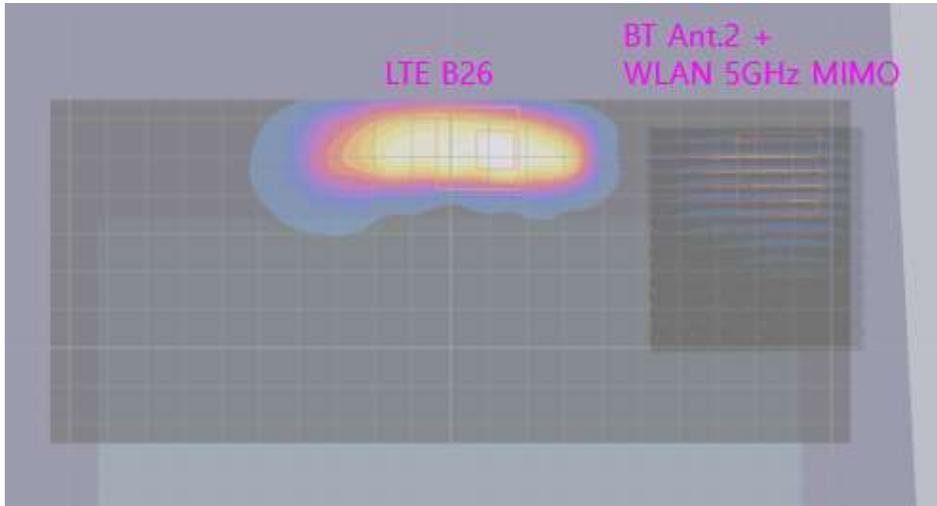
**Plot #51**



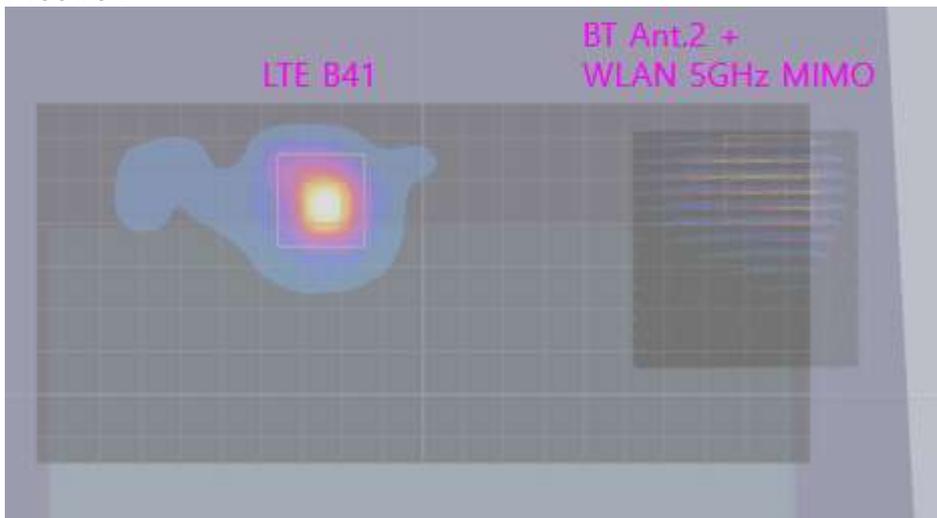
**Plot #52**



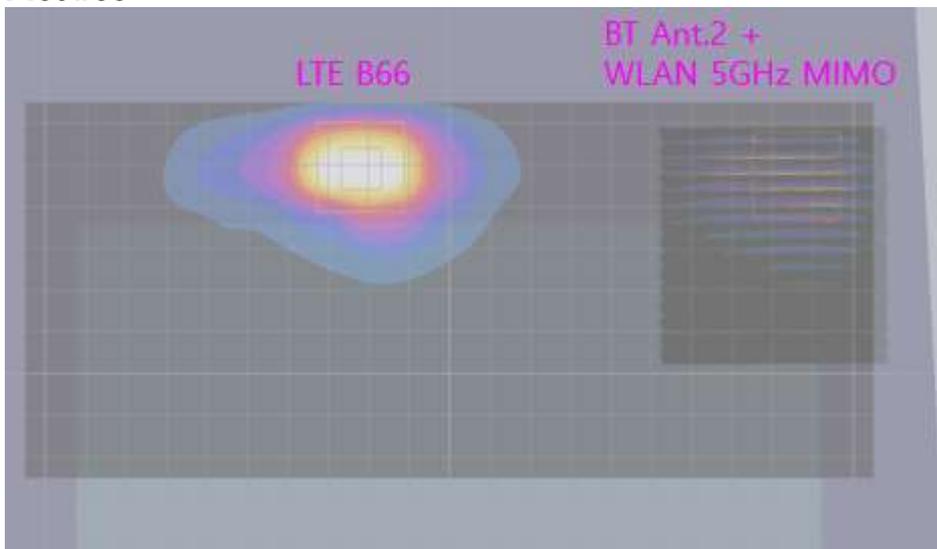
**Plot #53**



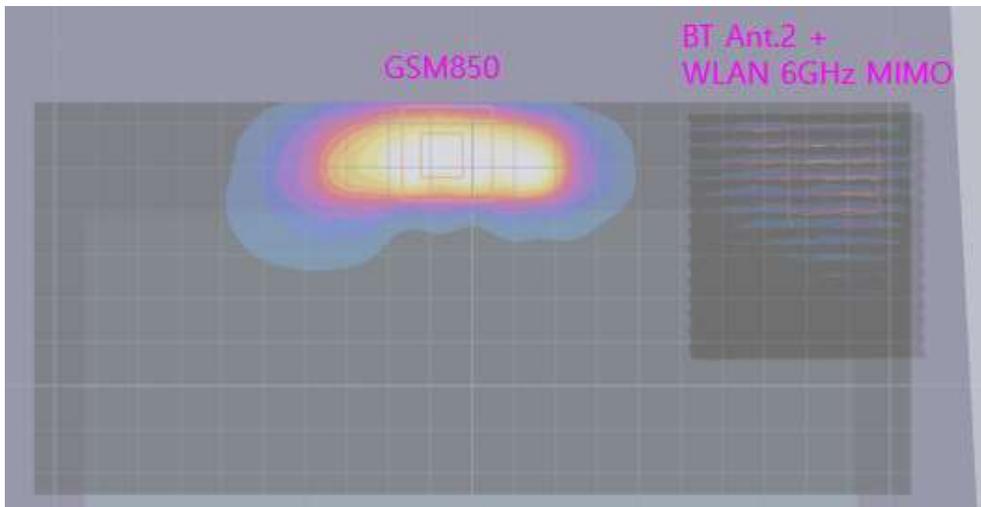
**Plot #54**



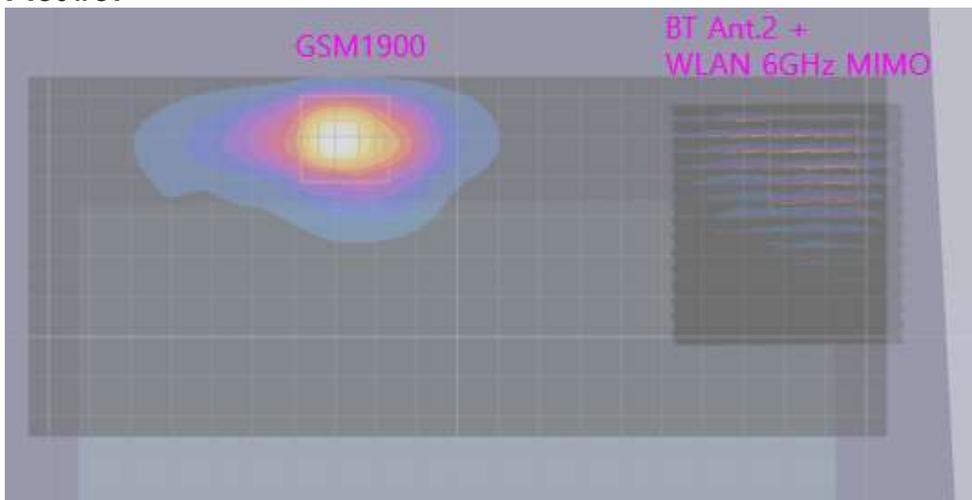
**Plot #55**



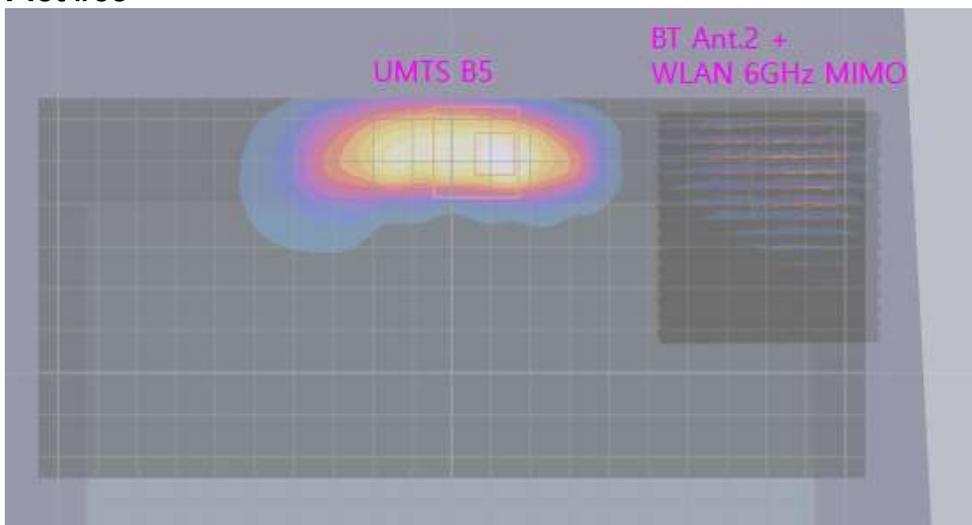
**Plot #56**



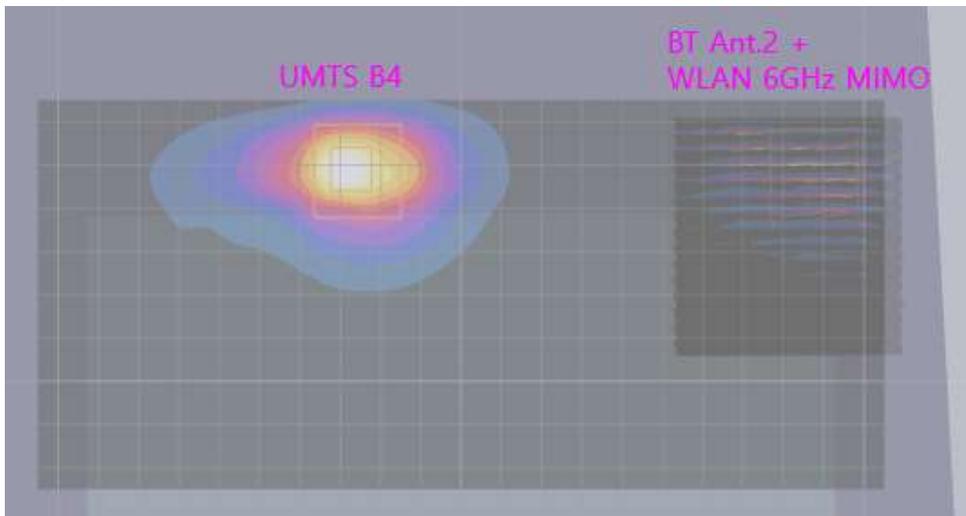
**Plot #57**



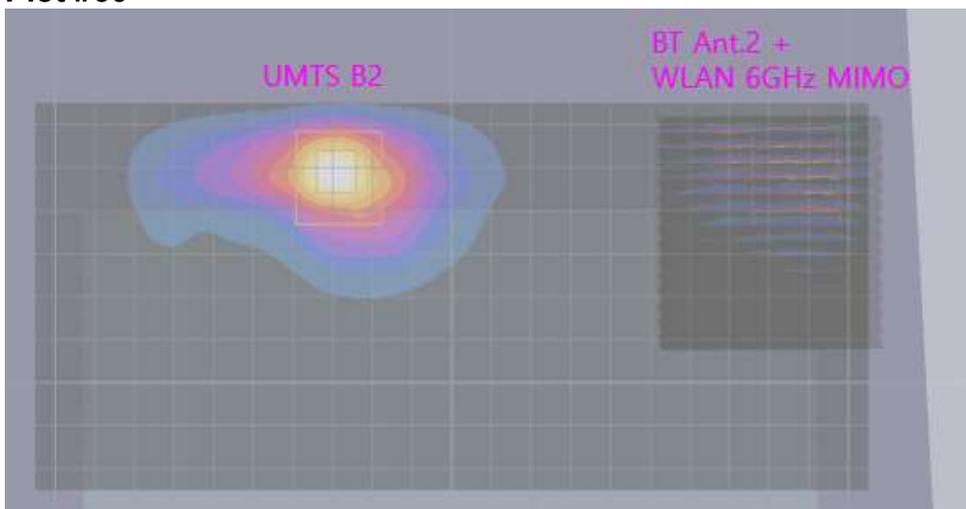
**Plot #58**



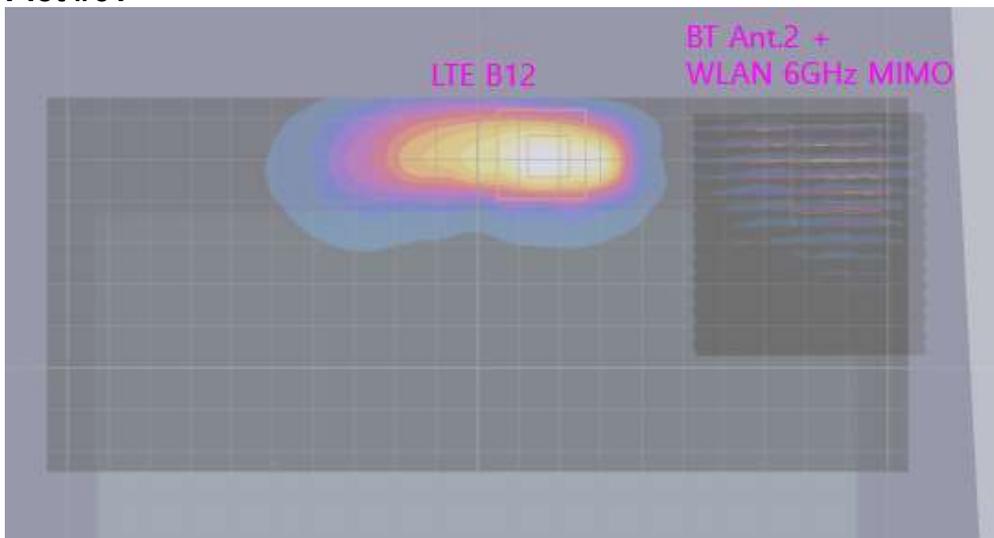
**Plot #59**



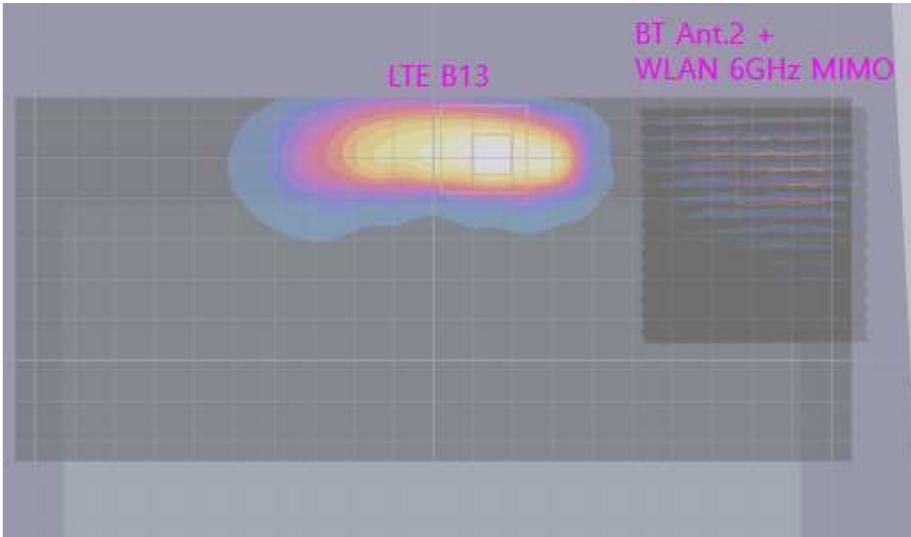
**Plot #60**



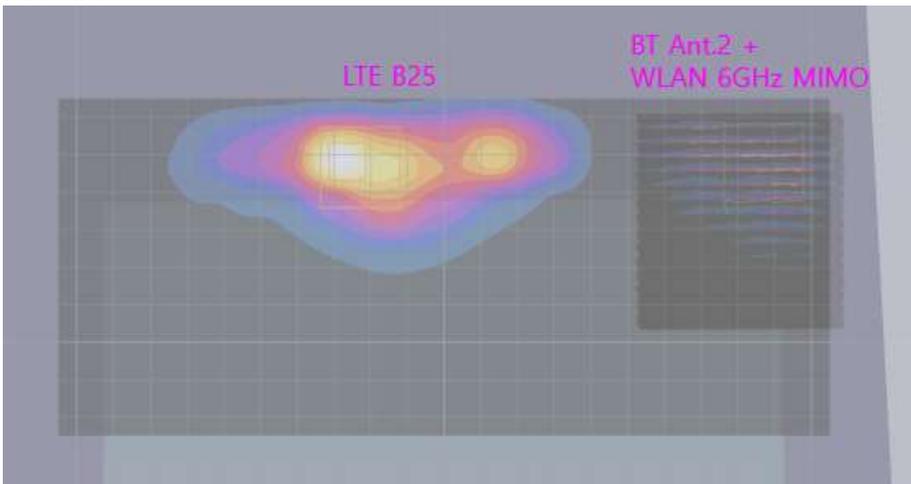
**Plot #61**



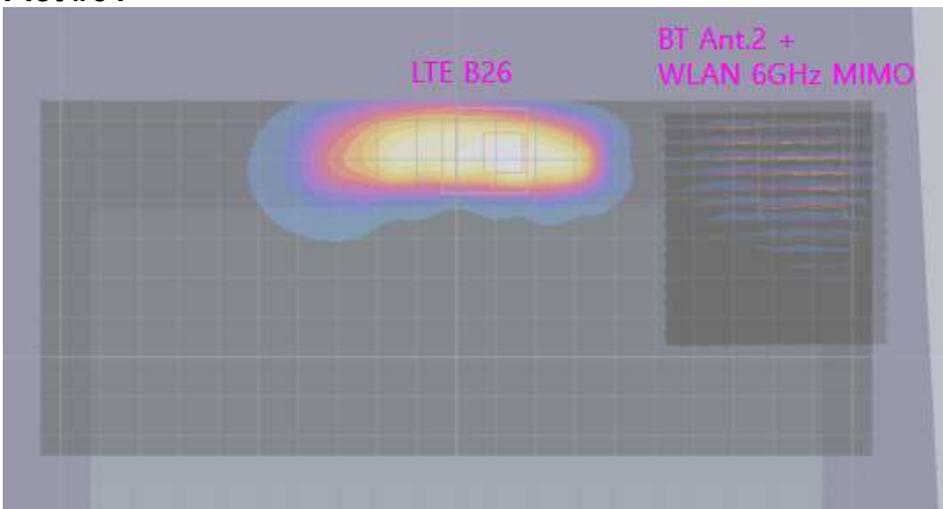
**Plot #62**



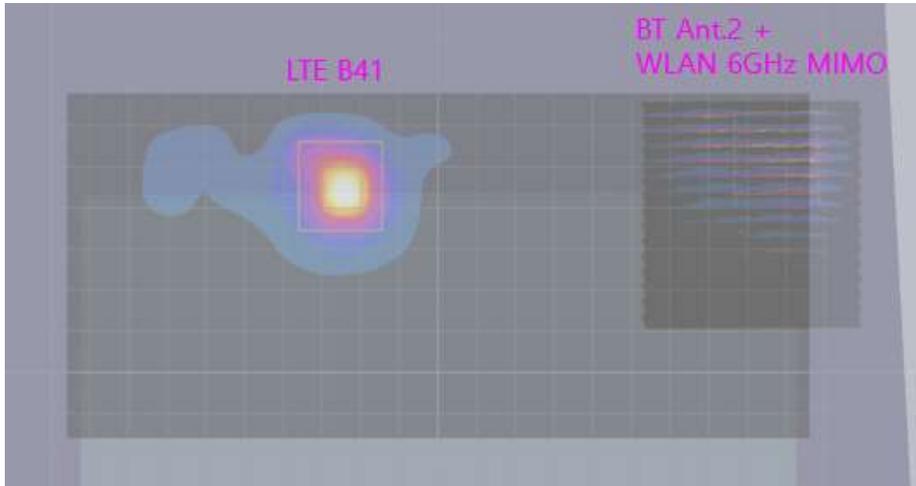
**Plot #63**



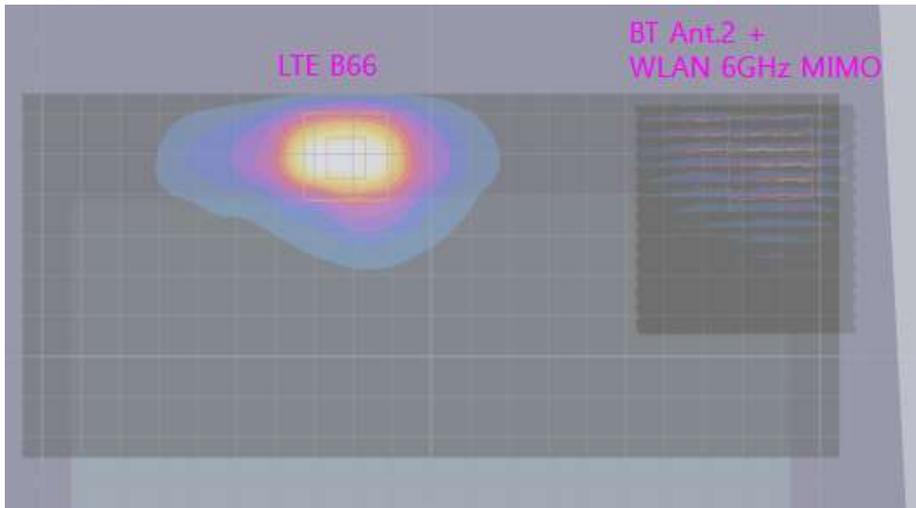
**Plot #64**



**Plot #65**



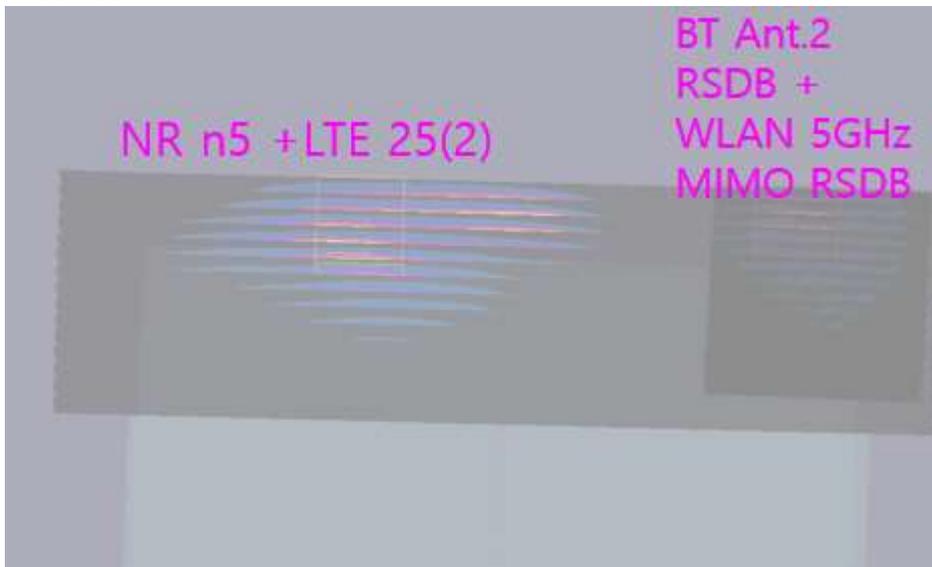
**Plot #66**



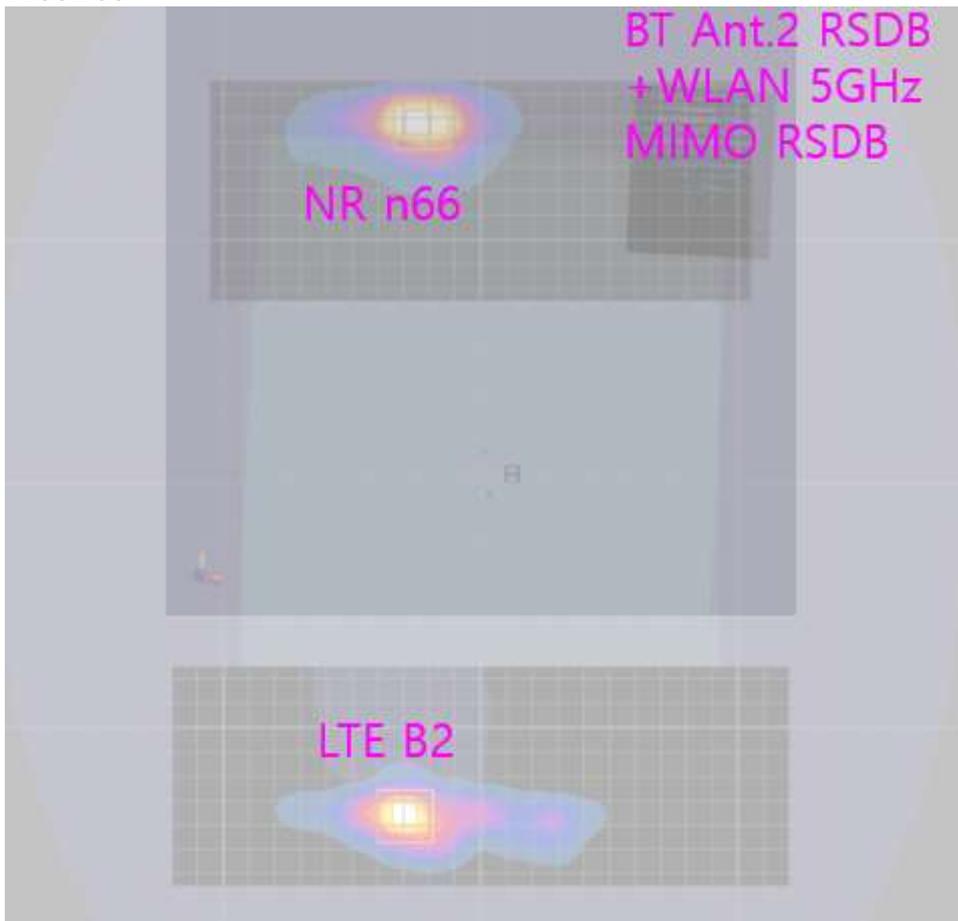
**Plot #67**



**Plot #68**



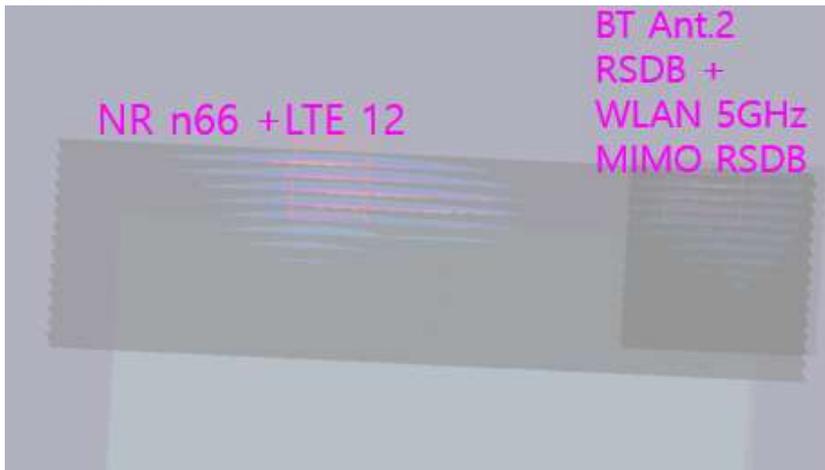
**Plot #69**



**Plot #70**



**Plot #71**



**Plot #72**



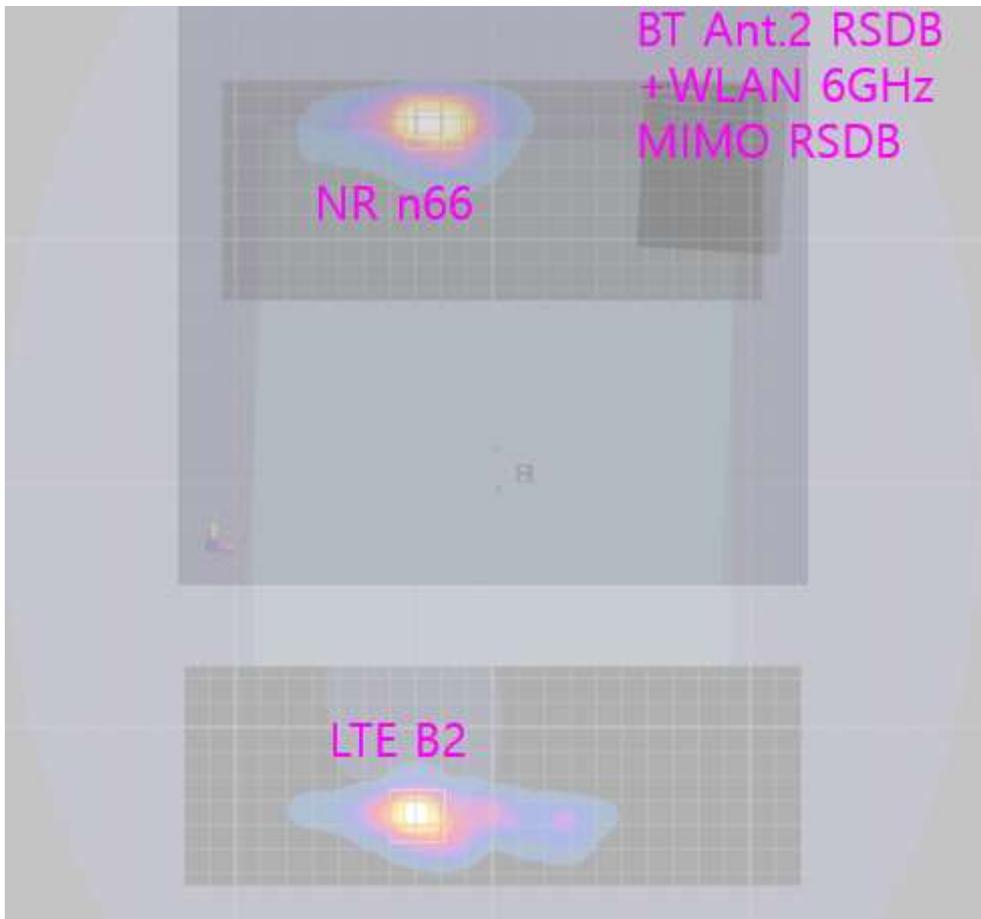
**Plot #73**



**Plot #74**



**Plot #75**



**Plot #76**



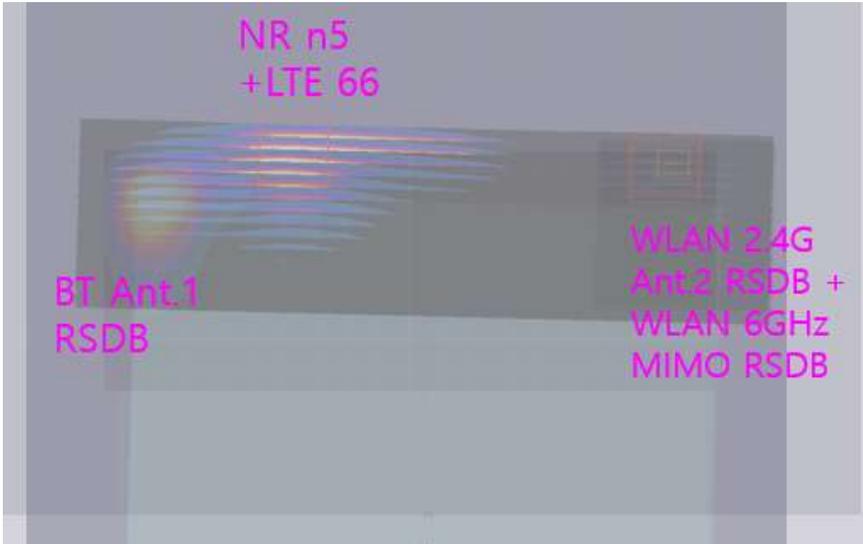
**Plot #77**



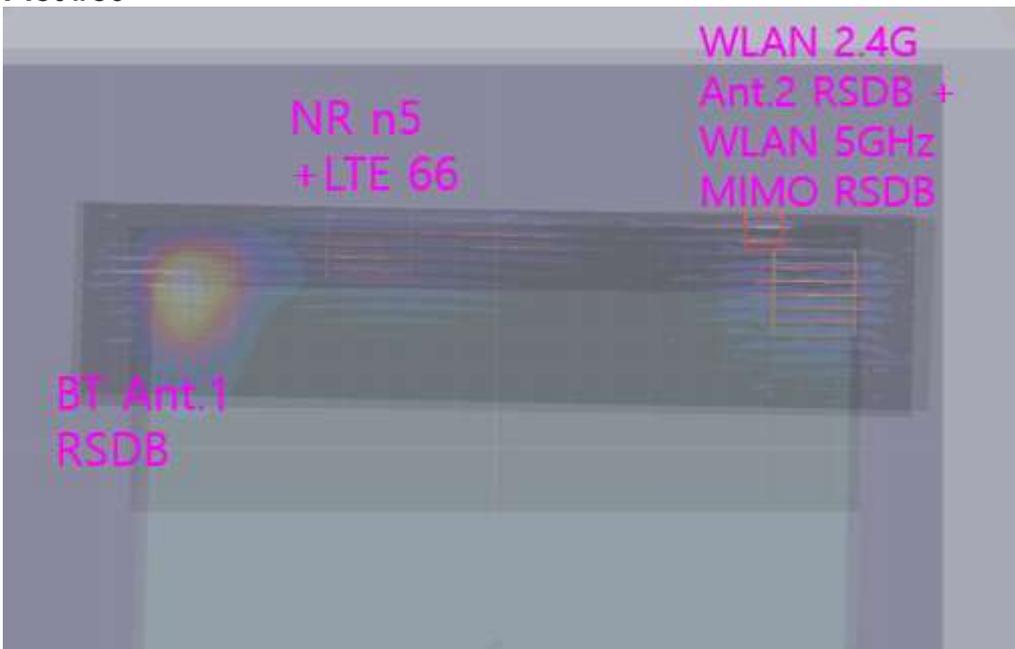
**Plot #78**



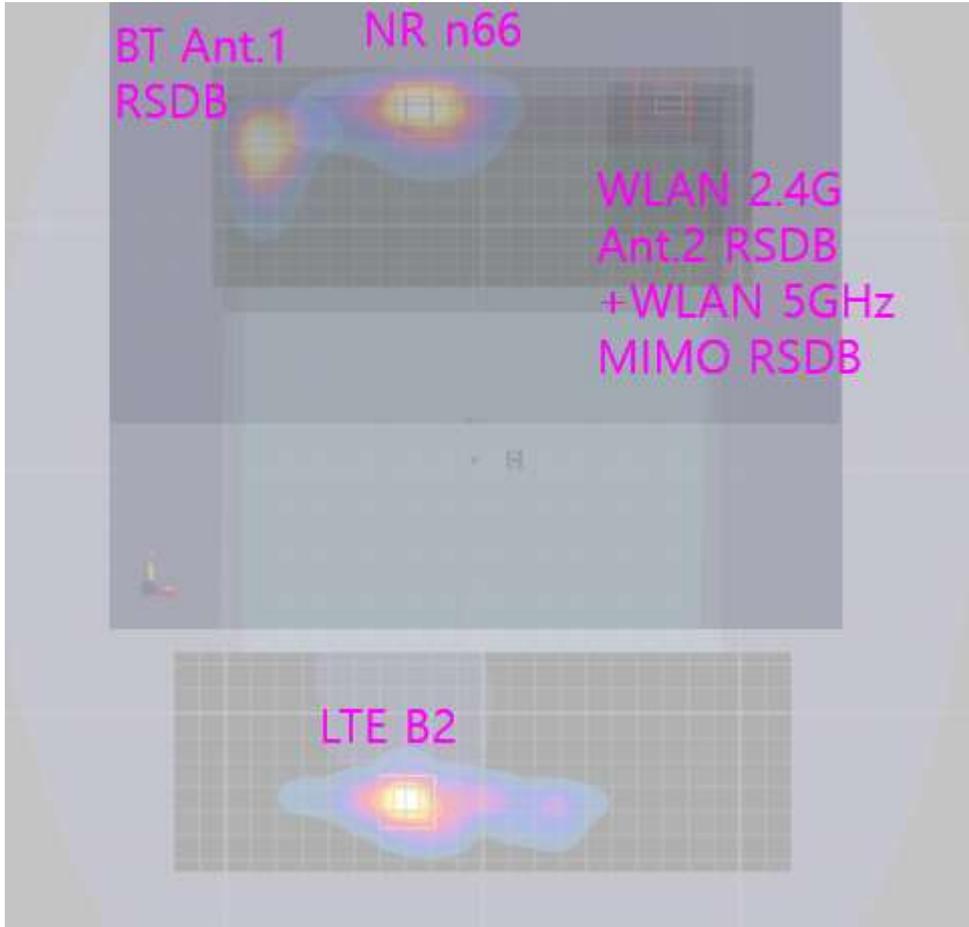
**Plot #79**



**Plot #80**



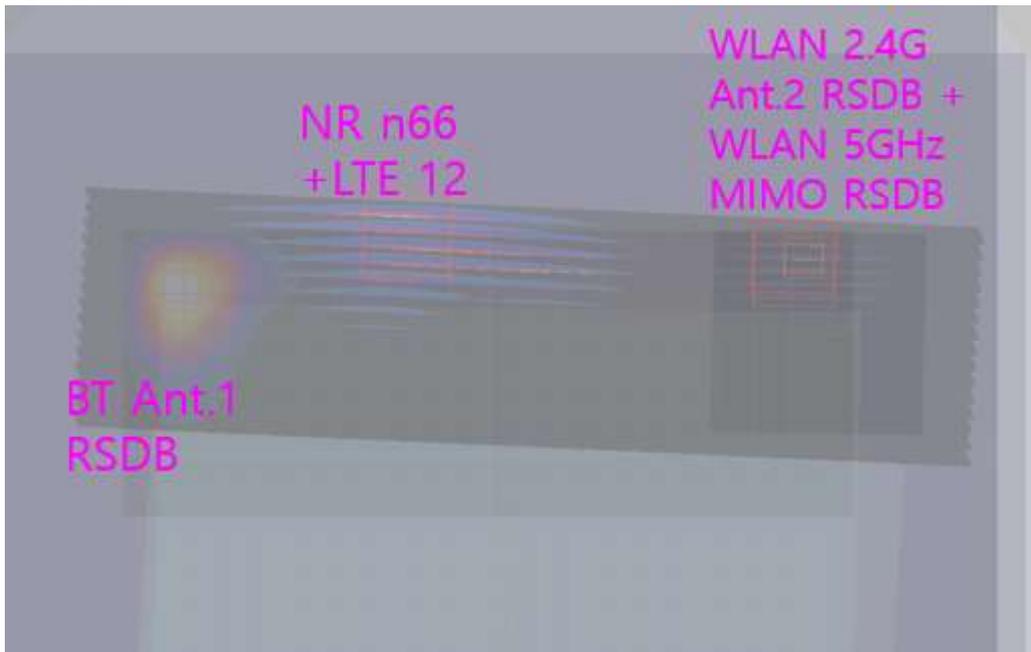
**Plot #81**



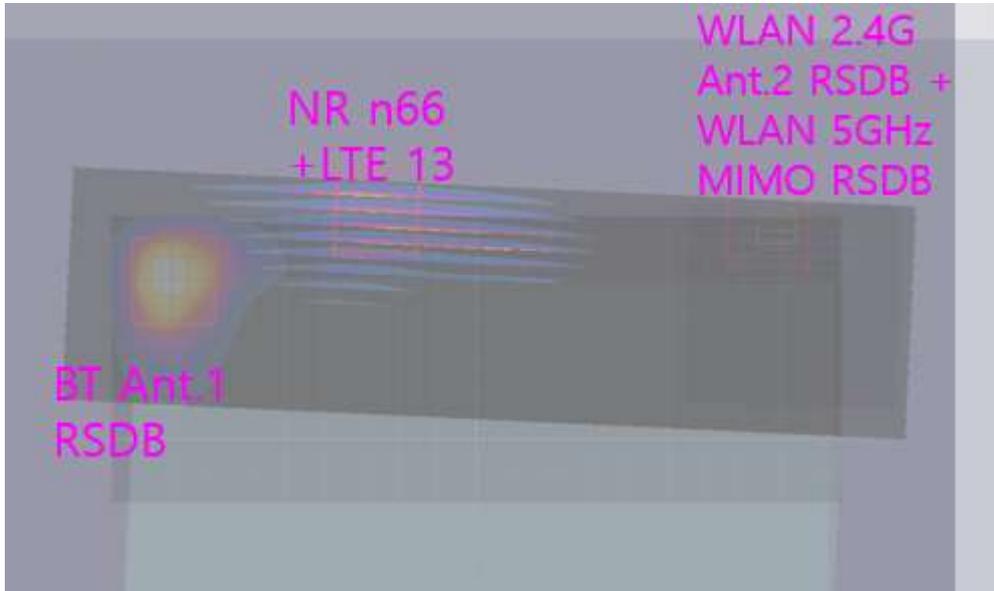
**Plot #82**



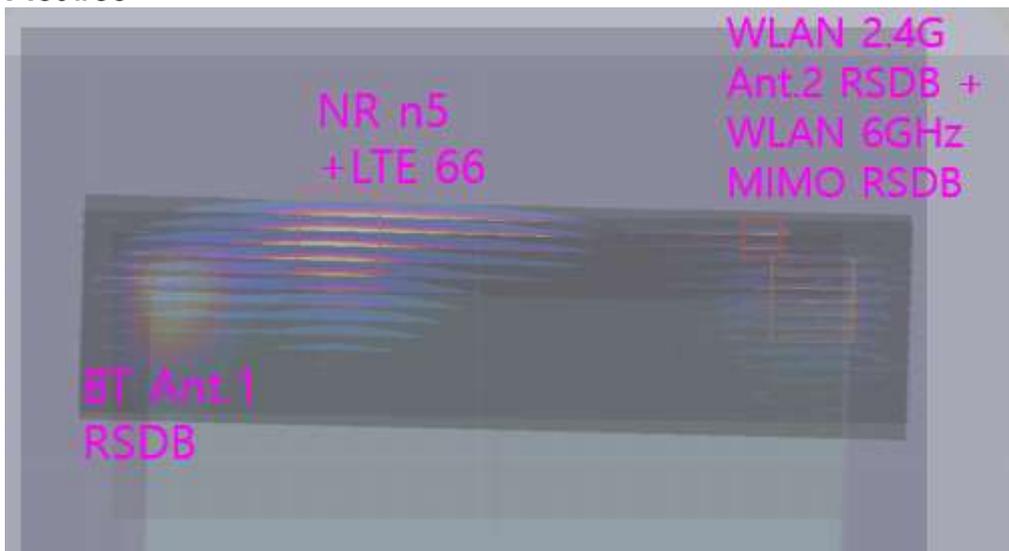
**Plot #83**



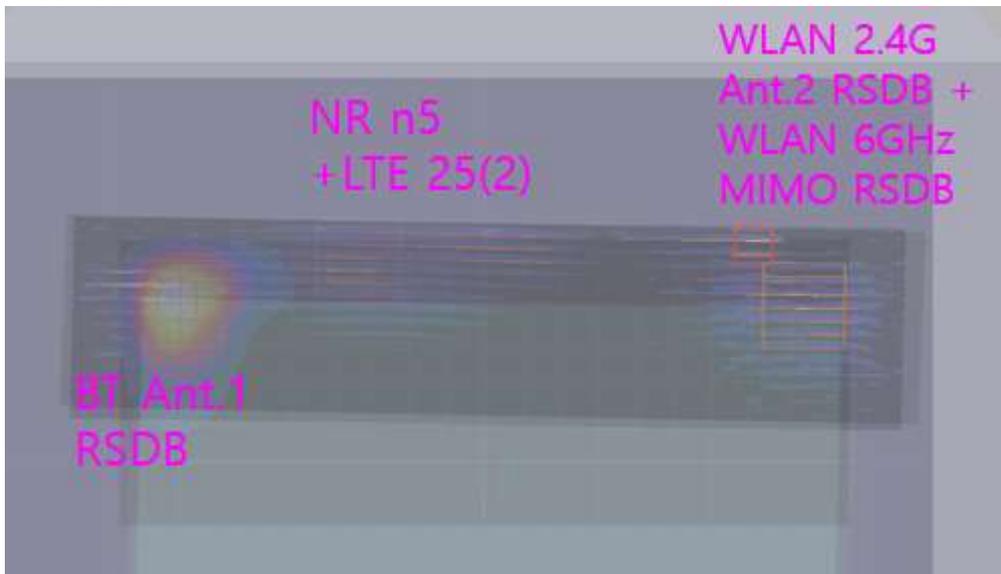
**Plot #84**



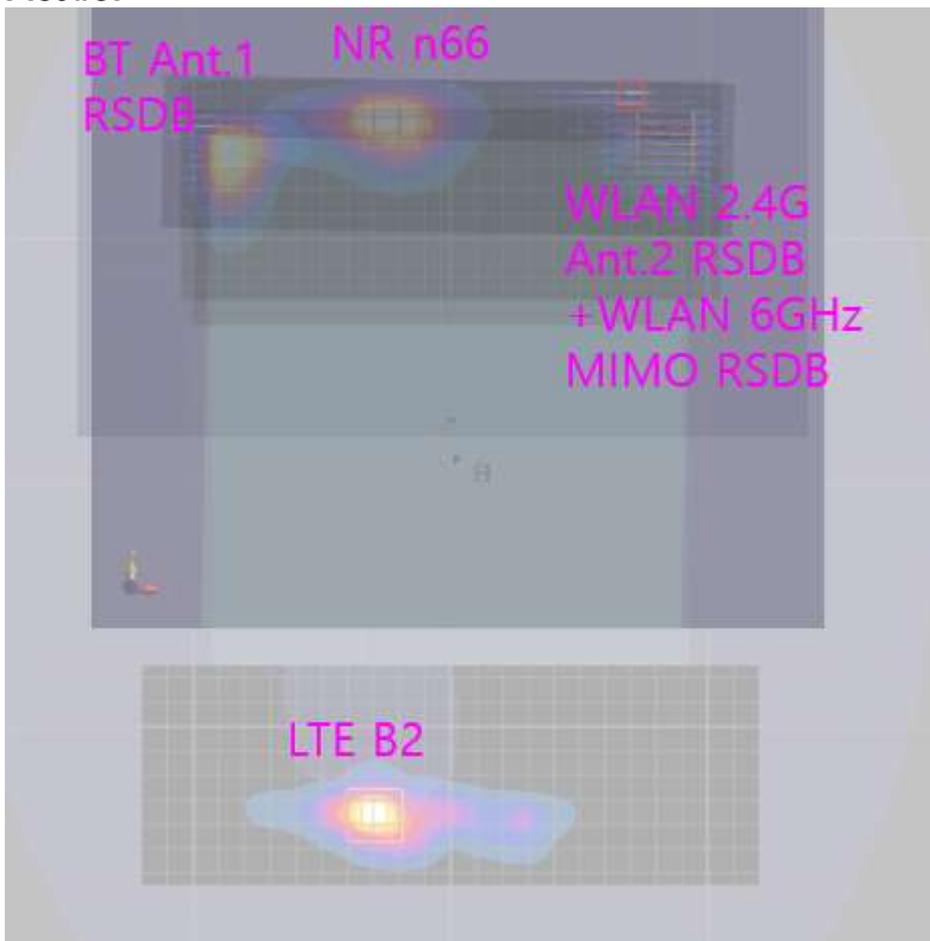
**Plot #85**



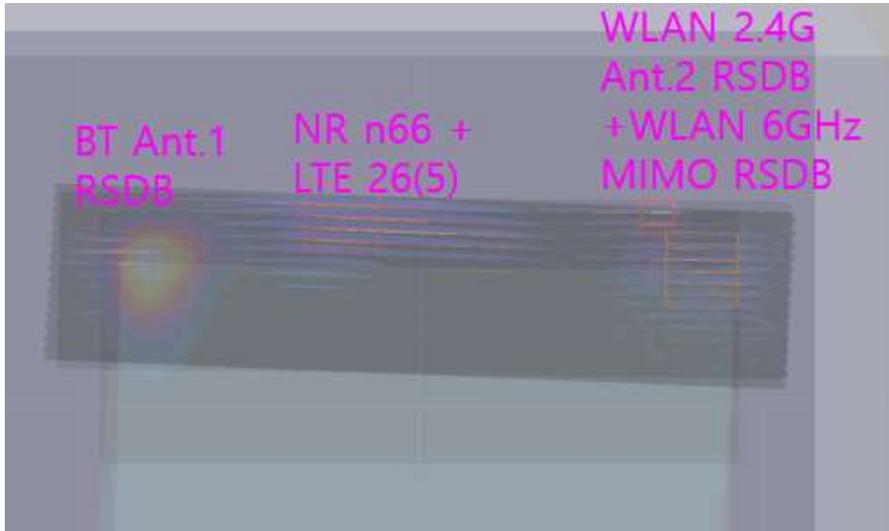
Plot #86



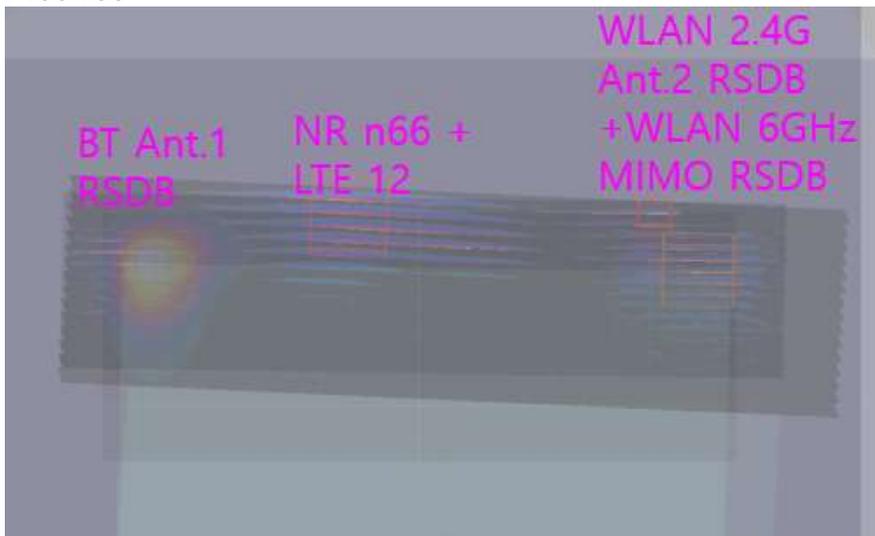
Plot #87



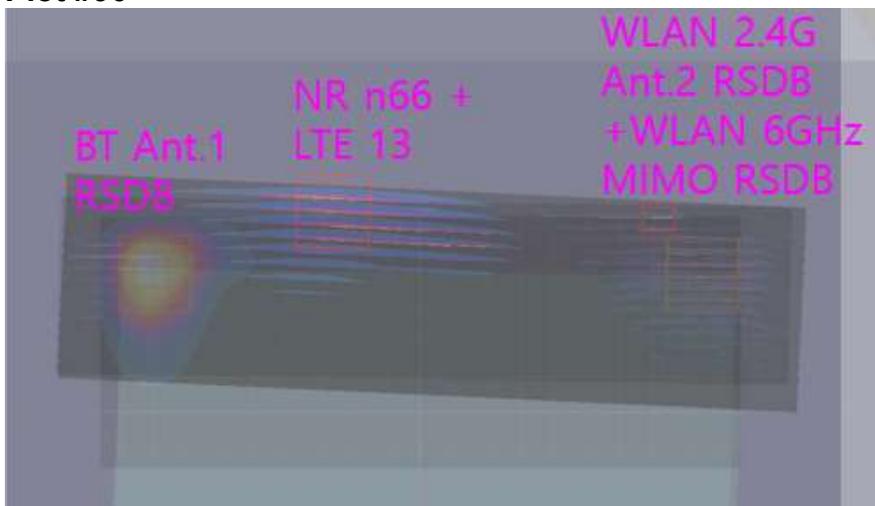
**Plot #88**



**Plot #89**



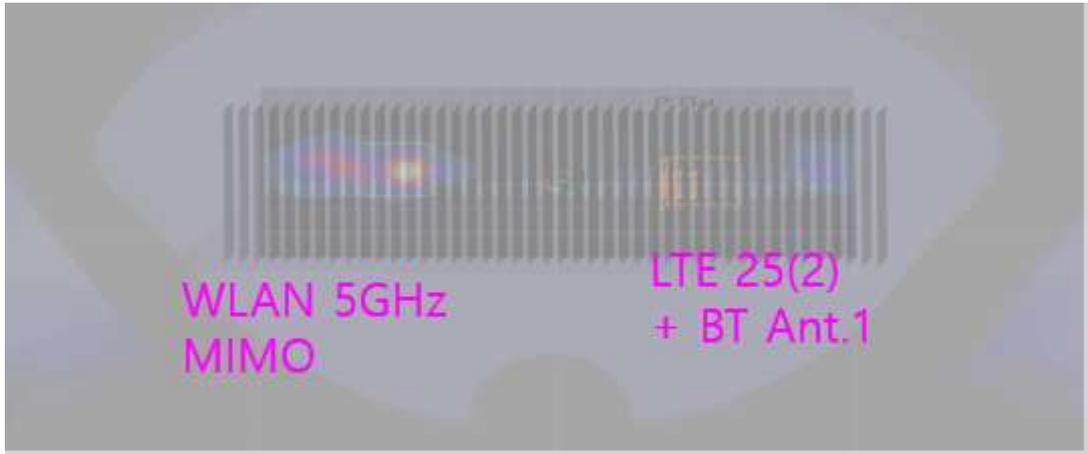
**Plot #90**



**Plot #91**



**Plot #92**



**Plot #93**



**Plot #94**



**Plot #95**



**Plot #96**



**Plot #97**



### 14.2.6 EFS Ver 16. GEN2 Sub 6 Favor mode considerations

Per Qualcomm document 80-W2112-4 Rev. R October 19, 2021, The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG) and mmW module groups (MG). Sub6 Tx antennas in UE are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating either of below conditions for all exposure scenarios

a) Every antenna from one sub6 AG meets SPLSR criteria (Section 4.3.2(c) in FCC KDB 447498 D01) with every antenna of another sub6 AG. These criteria must be demonstrated for all antenna combinations for each pair of AGs.

Or

b) Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside Smart Transmit is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs

#### Using SPLSR Criteria for sub6 Antenna Groups

For each of the supported technology/bands per antenna, in addition to the maximum reported SAR, the SAR hotspot location in a coordinate system aligned along with device dimensions (x-axis along width, and y-axis along length) should also be recorded. Since the AGs are along the length of the device (top and bottom), i.e., along Y-axis, only Y coordinate of SAR hotspot location needs to be recorded. X and Z coordinate of SAR hotspot location are ignored (conservative) in this analysis for simplicity of calculations.

### SPLSR Evaluation

Mode/Band	X(m)	Y(m)	Z(m)	Reported SAR [W/kg]
LTE B2 Sub	0.029	-0.129	-0.181	0.479
LTE B66 Sub	0.014	-0.122	-0.182	0.550
n5	-0.015	0.134	-0.178	0.806
n66	-0.002	0.135	-0.178	1.091

Postion	Max Mode		Sum 1g SAR	1+2 Peak SAR Separation Distance	SPLSR	Plot No.
			[W/kg]			
	1	2	1+2	[mm]		
Rear	NR n5	Sub1 LTE 2	1.285	266.102	0.005	#1
	NR n66		1.570	265.721	0.007	#2
	NR n5	Sub1 LTE 66	1.356	256.614	0.006	#3
	NR n66		1.641	256.965	0.008	#4

### **14.3 Simultaneous Transmission Conclusion**

The above numerical summed SAR Results are sufficient to determine that simultaneous transmission cases will not exceed the SAR Limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE1528-2013.

## 15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency band:

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is  $\geq 0.80$  W/kg or 10g SAR  $\geq 2.0$ W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is  $\geq 1.45$  W/kg for 1g SAR or  $\geq 3.625$  W/kg for 10g SAR (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5$  W/kg for 1g SAR or  $\geq 3.75$  W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Body SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Measured SAR (W/kg)	SAR Ratio
Mhz	Channel					
1 880	661	GSM 1900	Rear (Active)	0.908	0.899	1.01
1 752.8	1513	UMTS Band 4	Rear (Active)	1.090	1.080	1.01
1 907.6	9538	UMTS Band 2	Rear (Active)	1.020	0.981	1.04
1 905.0	26590	LTE Band 25	Top (Active)	0.824	0.709	1.16
1 770	132572	LTE Band 66	Rear (Active)	1.190	1.110	1.07
1 745	349000	NR Band n66	Rear (Active)	0.981	0.912	1.08
5 845	169	Wi-Fi (NII)	Right	0.853	0.776	1.10

## 16. Device Holder Perturbation Verification.

In accordance with published DUT Holder Perturbations in Oct.2016 TCB Workshop.  
When Highest reported SAR is over 1.2 W/kg, Holder Perturbation Verification is required for each antenna, using the highest configuration among all applicable frequency bands.

Frequency		Mode/Band	Configuration	Highest Reported SAR		Deviation (%)
				(without Device Holder)	(with Device Holder)	
MHz	Channel			(W/kg)	(W/kg)	
1 752.8	1513	UMTS Band 4	Rear (Active)	1.251	1.182	-5.83

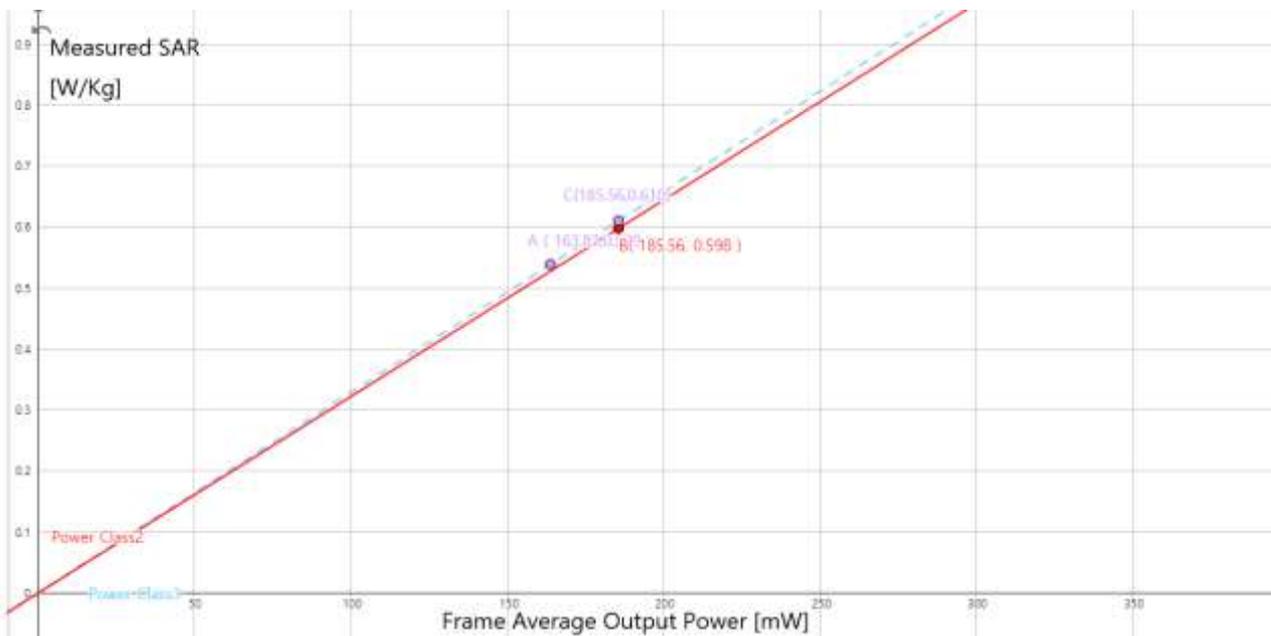
## 17. LTE Band 41 Power Class 2 and Power class 3 Linearity

This Device Supports Power Class 2 and Power Class 3 operations for LTE band 41. The Highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL Configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power class 3. SAR with power class 2 at the highest power and available duty factor was additionally performed for the power class 2 configuration with the Highest SAR for each exposure condition.

The linearity between the power class 3 and Power class 2 SAR Results and the respective frame averaged powers was calculated to determine the results were linear.

Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as less than 10 % and all reported SAR values were < 1.4 W/kg

LTE Band 41 Linearity Data Table		
Configurations	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	25	27.5
Measured Output Power[dBm]	24.13	26.32
Measured SAR[W/kg]	0.539	0.598
Measured Power[mW]	258.82	428.55
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	163.83	185.56
% deviation from expected linearity		-2.05 %



## 18. Dynamic Antenna tuner testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode and exposure combinations. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was  $> 1.2$  W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 144 states.

The operational description contains more information about the design and implementation of the dynamic antenna tuning.

UMTS B5		LTE B12/17		NR n5		LTE B13		LTE B5/26	
Grip sensor Back-off		Grip sensor Backoff		Grip sensor Backoff		Grip sensor Backoff		Grip sensor Backoff	
Test Position	TOP	Test Position	Rear	Test Position	Top	Test Position	Back	Test Position	Top
Spacing	0mm	Spacing	0mm	Spacing	0mm	Spacing	0mm	Spacing	0mm
Frequency (MHz)	836.6	Frequency (MHz)	707.5	Frequency (MHz)	836.5	Frequency (MHz)	782	Frequency (MHz)	831.5
Channel	4223	Channel	23095	Channel	167300	Channel	23230	Channel	26865
Measured 1g SAR (W/kg)	0.557	Measured 1g SAR (W/kg)	0.63	Measured 1g SAR (W/kg)	0.366	Measured 1g SAR (W/kg)	0.591	Measured 1g SAR (W/kg)	0.538
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
auto Tune(22)	0.712	auto Tune(0)	0.811	auto Tune(109)	0.552	auto Tune(108)	0.741	auto Tune(109)	0.815
0	0.601	0	0.811	0	0.501	0	0.530	0	0.615
4	0.613	5	0.45	1	0.278	2	0.571	3	0.684
9	0.635	10	0.541	6	0.465	7	0.634	8	0.637
14	0.529	15	0.514	11	0.401	12	0.509	13	0.701
19	0.394	20	0.549	16	0.509	17	0.675	18	0.357
24	0.489	25	0.435	21	0.301	22	0.534	23	0.144
29	0.507	30	0.334	26	0.218	27	0.142	28	0.115
34	0.586	35	0.192	31	0.169	32	0.365	33	0.072
39	0.506	40	0.215	36	0.166	37	0.012	38	0.331
44	0.298	45	0.042	41	0.255	42	0.435	43	0.658
49	0.126	50	0.365	46	0.326	47	0.193	48	0.452
54	0.204	55	0.1435	51	0.487	52	0.546	53	0.190
59	0.262	60	0.436	56	0.401	57	0.342	58	0.352
64	0.178	65	0.302	61	0.231	62	0.335	63	0.455
69	0.276	70	0.295	66	0.295	67	0.121	68	0.102
74	0.204	75	0.255	71	0.314	72	0.322	73	0.355
79	0.302	80	0.122	76	0.302	77	0.112	78	0.122
84	0.270	85	0.152	81	0.221	82	0.151	83	0.365
89	0.359	90	0.131	86	0.150	87	0.589	88	0.114
94	0.387	95	0.202	91	0.174	92	0.450	93	0.536
99	0.466	100	0.082	96	0.288	97	0.369	98	0.172
104	0.516	105	0.171	101	0.236	102	0.617	103	0.657
109	0.306	110	0.329	106	0.204	107	0.743	108	0.789
114	0.146	115	0.210	111	0.245	112	0.452	113	0.512
119	0.046	120	0.359	116	0.216	117	0.185	118	0.123
124	0.112	125	0.367	121	0.357	122	0.260	123	0.152
129	0.235	130	0.339	126	0.311	127	0.371	128	0.022
134	0.452	135	0.028	131	0.350	132	0.138	133	0.485
139	0.092	140	0.145	136	0.080	137	0.065	138	0.067
		145		141	0.124	142	0.03	143	0.112

UMTS B4		UMTS B2		LTE B4/66		LTE B2/25		NR n66	
Grip sensor Backoff		Grip sensor Backoff		Grip sensor Backoff		Grip sensor Backoff		Grip sensor Backoff	
Test Position	Rear	Test Position	Rear	Test Position	Rear	Test Position	Top	Test Position	Rear
Spacing	0mm	Spacing	0mm	Spacing	0mm	Spacing	0mm	Spacing	0mm
Frequency (MHz)	1 752.8	Frequency (MHz)	1 907.6	Frequency (MHz)	1770	Frequency (MHz)	1 905.0	Frequency (MHz)	1 770
Channel	1513	Channel	9538	Channel	132322	Channel	26590	Channel	132572
Measured 1g SAR (W/kg)	1.09	Measured 1g SAR (W/kg)	1.02	Measured 1g SAR (W/kg)	1.19	Measured 1g SAR (W/kg)	0.824	Measured 1g SAR (W/kg)	1.19
Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)		Average Value of time Sweep (W/kg)	
auto Tune(36)	1.38	auto Tune(45)	1.42	auto Tune(49)	1.47	auto Tune(0)	1.21	auto Tune(49)	1.468
0	0.980	0	1.319	0	1.037	0	1.210	0	1.117
1	0.953	1	0.960	1	1.010	1	0.995	1	1.090
2	1.107	2	0.806	2	1.164	2	0.752	2	1.244
3	0.901	3	0.813	3	0.958	3	0.704	3	1.038
4	1.007	4	0.730	4	1.064	4	0.621	4	1.144
5	0.807	5	0.675	5	0.864	5	0.566	5	0.944
6	0.857	6	0.813	6	0.914	6	0.704	6	0.994
7	0.591	7	0.879	7	0.648	7	0.770	7	0.728
8	0.866	8	0.910	8	0.923	8	0.801	8	1.003
9	0.976	9	0.990	9	1.033	9	0.881	9	1.113
10	1.131	10	0.990	10	1.188	10	0.881	10	1.268
11	0.981	11	0.730	11	1.038	11	0.621	11	1.118
12	0.938	12	0.883	12	0.995	12	0.774	12	1.075
13	1.022	13	0.980	13	1.079	13	0.871	13	1.159
14	0.778	14	0.818	14	0.835	14	0.709	14	0.915
15	0.957	15	0.811	15	1.014	15	0.702	15	1.094
16	0.888	16	0.734	16	0.945	16	0.625	16	1.025
17	0.884	17	0.993	17	0.941	17	0.884	17	1.021
18	1.071	18	0.930	18	1.128	18	0.821	18	1.208
19	1.062	19	0.630	19	1.119	19	0.521	19	1.199
20	1.031	20	0.796	20	1.088	20	0.687	20	1.168
21	0.777	21	0.761	21	0.834	21	0.652	21	0.914
22	0.707	22	0.661	22	0.764	22	0.552	22	0.844
23	0.468	23	0.744	23	0.525	23	0.635	23	0.605
24	0.707	24	0.463	24	0.764	24	0.354	24	0.844
25	0.758	25	0.319	25	0.815	25	0.210	25	0.895
26	0.577	26	0.224	26	0.634	26	0.115	26	0.714
27	0.857	27	0.621	27	0.914	27	0.512	27	0.994
28	0.782	28	0.430	28	0.839	28	0.321	28	0.919
29	0.725	29	0.265	29	0.782	29	0.156	29	0.862
30	0.612	30	0.478	30	0.669	30	0.369	30	0.749
31	0.607	31	0.707	31	0.664	31	0.598	31	0.744
32	0.950	32	0.796	32	1.007	32	0.687	32	1.087
33	0.833	33	0.850	33	0.890	33	0.741	33	0.970

34	0.711	34	0.738	34	0.768	34	0.629	34	0.848
35	1.020	35	0.628	35	0.818	35	0.519	35	0.898
36	1.380	36	0.809	36	0.941	36	0.700	36	1.021
37	0.901	37	0.845	37	0.922	37	0.736	37	1.002
38	0.882	38	0.711	38	0.939	38	0.602	38	1.019
39	0.906	39	0.607	39	0.962	39	0.498	39	1.042
40	0.930	40	0.668	40	0.986	40	0.559	40	1.066
41	0.953	41	0.824	41	1.010	41	0.715	41	1.090
42	0.713	42	1.030	42	0.942	42	0.698	42	0.850
43	0.542	43	0.998	43	0.909	43	0.315	43	0.679
44	0.481	44	1.210	44	0.872	44	0.805	44	0.618
45	0.420	45	1.420	45	0.901	45	0.865	45	0.557
46	0.359	46	1.310	46	1.192	46	0.754	46	0.496
47	0.885	47	0.981	47	1.114	47	0.658	47	0.844
48	0.859	48	0.905	48	1.060	48	0.887	48	1.295
49	0.681	49	0.885	49	1.470	49	0.901	49	1.468
50	0.475	50	0.717	50	1.230	50	0.775	50	1.272
51	0.610	51	0.725	51	1.132	51	0.616	51	1.194
52	0.764	52	0.671	52	1.157	52	0.562	52	1.068
53	0.809	53	0.710	53	1.182	53	0.601	53	1.162
54	0.744	54	0.873	54	0.958	54	0.764	54	1.187
55	0.859	55	0.668	55	0.983	55	0.559	55	1.212
56	0.445	56	0.630	56	0.933	56	0.521	56	1.237
57	0.625	57	0.561	57	1.182	57	0.452	57	1.262
58	0.676	58	0.460	58	0.958	58	0.351	58	1.038
59	0.685	59	0.345	59	0.983	59	0.236	59	1.063
60	0.475	60	0.584	60	0.933	60	0.475	60	1.013
61	0.827	61	0.403	61	0.883	61	0.295	61	0.963
62	0.777	62	0.364	62	0.833	62	0.255	62	0.913
63	0.727	63	0.325	63	0.784	63	0.216	63	0.863
64	0.677	64	0.975	64	0.734	64	0.866	64	0.814
65	0.628	65	0.764	65	0.684	65	0.655	65	0.764
66	0.578	66	0.441	66	0.634	66	0.332	66	0.714
67	0.528	67	0.760	67	0.584	67	0.651	67	0.664
68	0.478	68	0.478	68	0.535	68	0.369	68	0.614
69	0.180	69	0.531	69	0.236	69	0.422	69	0.316
70	0.067	70	0.305	70	0.123	70	0.196	70	0.203
71	0.465	71	0.207	71	0.522	71	0.098	71	0.602
72	0.448	72	0.222	72	0.505	72	0.113	72	0.585
73	0.178	73	0.229	73	0.234	73	0.120	73	0.314
74	0.142	74	0.187	74	0.198	74	0.079	74	0.278
75	0.148	75	0.166	75	0.204	75	0.057	75	0.284
76	0.468	76	0.145	76	0.525	76	0.036	76	0.605
77	0.508	77	0.123	77	0.565	77	0.015	77	0.645
78	0.577	78	0.115	78	0.634	78	0.007	78	0.714
79	0.457	79	0.081	79	0.514	79	0.122	79	0.594
80	0.516	80	0.218	80	0.573	80	0.109	80	0.653
81	0.113	81	0.310	81	0.169	81	0.201	81	0.249
82	0.308	82	0.460	82	0.364	82	0.351	82	0.444
83	0.308	83	0.571	83	0.364	83	0.462	83	0.444

84	0.657	84	0.692	84	0.714	84	0.583	84	0.794
85	0.581	85	0.384	85	0.638	85	0.275	85	0.718
86	0.477	86	0.142	86	0.534	86	0.033	86	0.614
87	0.526	87	0.450	87	0.583	87	0.342	87	0.663
88	0.478	88	0.392	88	0.535	88	0.283	88	0.615
89	0.468	89	0.320	89	0.525	89	0.211	89	0.605
90	0.587	90	0.242	90	0.644	90	0.133	90	0.724
91	0.577	91	0.207	91	0.634	91	0.098	91	0.714
92	0.497	92	0.295	92	0.554	92	0.186	92	0.634
93	0.380	93	0.301	93	0.437	93	0.192	93	0.517
94	0.651	94	0.327	94	0.708	94	0.219	94	0.788
95	0.072	95	0.354	95	0.128	95	0.245	95	0.208
96	0.180	96	0.162	96	0.236	96	0.053	96	0.316
97	0.508	97	0.207	97	0.565	97	0.098	97	0.645
98	0.388	98	0.164	98	0.445	98	0.055	98	0.525
99	0.296	99	0.223	99	0.352	99	0.114	99	0.432
100	0.377	100	0.266	100	0.433	100	0.157	100	0.513
101	0.457	101	0.332	101	0.514	101	0.223	101	0.594
102	0.390	102	0.388	102	0.447	102	0.279	102	0.527
103	0.874	103	0.363	103	0.931	103	0.254	103	1.011
104	0.713	104	0.398	104	0.770	104	0.289	104	0.850
105	0.566	105	0.344	105	0.623	105	0.235	105	0.703
106	0.570	106	0.468	106	0.627	106	0.359	106	0.707
107	0.471	107	0.863	107	0.528	107	0.658	107	0.608
108	0.465	108	0.921	108	0.522	108	0.701	108	0.602
109	0.459	109	0.903	109	0.516	109	0.523	109	0.596
110	0.080	110	0.284	110	0.136	110	0.175	110	0.216
111	0.180	111	0.207	111	0.236	111	0.098	111	0.316
112	0.053	112	0.197	112	0.109	112	0.088	112	0.189
113	0.535	113	0.287	113	0.592	113	0.178	113	0.672
114	0.379	114	0.452	114	0.436	114	0.343	114	0.515
115	0.423	115	0.617	115	0.480	115	0.509	115	0.560
116	0.417	116	0.782	116	0.474	116	0.674	116	0.554
117	0.265	117	0.947	117	0.321	117	0.839	117	0.401
118	0.167	118	0.995	118	0.223	118	0.886	118	0.303
119	0.100	119	0.345	119	0.156	119	0.236	119	0.236
120	0.531	120	0.310	120	0.588	120	0.201	120	0.668
121	0.498	121	0.277	121	0.554	121	0.168	121	0.634
122	0.519	122	0.206	122	0.576	122	0.097	122	0.656
123	0.541	123	0.207	123	0.597	123	0.098	123	0.677
124	0.563	124	0.120	124	0.619	124	0.011	124	0.699
125	0.584	125	0.274	125	0.641	125	0.165	125	0.720
126	0.606	126	0.222	126	0.662	126	0.113	126	0.742
127	0.627	127	0.207	127	0.684	127	0.098	127	0.764
128	0.649	128	0.307	128	0.705	128	0.198	128	0.785
129	0.671	129	0.263	129	0.727	129	0.154	129	0.807
130	0.445	130	0.197	130	0.502	130	0.088	130	0.582
131	0.468	131	0.134	131	0.525	131	0.025	131	0.605
132	0.445	132	0.471	132	0.502	132	0.362	132	0.582
133	0.501	133	0.215	133	0.558	133	0.106	133	0.638

---

134	0.603	134	0.377	134	0.660	134	0.268	134	0.740
135	0.524	135	0.348	135	0.581	135	0.239	135	0.661
136	0.610	136	0.434	136	0.667	136	0.325	136	0.747
137	0.458	137	0.186	137	0.515	137	0.077	137	0.595
138	0.577	138	0.215	138	0.634	138	0.106	138	0.714
139	0.657	139	0.430	139	0.714	139	0.321	139	0.794
140	0.674	140	0.345	140	0.731	140	0.236	140	0.811
141	0.397	141	0.228	141	0.453	141	0.119	141	0.533
142	0.064	142	0.465	142	0.120	142	0.356	142	0.200
143	0.063	143	0.149	143	0.119	143	0.040	143	0.199

## 19. Measurement Uncertainty

The measured SAR was  $<1.5$  W/Kg for 1g SAR and  $<3.75$  W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

## 20. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom		N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)/SP2	001729	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40332651310	01/26/2021	Annual	01/26/2022
TESTO	175-H1/Thermometer	44606559906	01/26/2021	Annual	01/26/2022
TESTO	608-H1/Thermometer	83348029	11/15/2021	Annual	01/26/2022
SPEAG	DAE4	869	03/29/2021	Annual	03/29/2022
SPEAG	DAE4	1417	02/22/2021	Annual	02/22/2022
SPEAG	DAE4	911	03/22/2021	Annual	03/22/2022
SPEAG	DAE4	504	02/19/2021	Annual	02/19/2022
SPEAG	DAE4	868	09/27/2021	Annual	09/27/2022
SPEAG	DAE4	648	06/02/2021	Annual	06/02/2022
SPEAG	E-Field Probe EX3DV4	7309	04/20/2021	Annual	04/20/2022
SPEAG	E-Field Probe ES3DV3	3076	07/28/2021	Annual	07/28/2022
SPEAG	E-Field Probe EX3DV4	3972	05/21/2021	Annual	05/21/2022
SPEAG	E-Field Probe EX3DV4	7679	09/10/2021	Annual	09/10/2022
SPEAG	E-Field Probe EX3DV4	3968	09/29/2021	Annual	09/29/2022
SPEAG	E-Field Probe EX3DV4	7654	05/21/2021	Annual	05/21/2022
SPEAG	Dipole D750V3	1014	06/01/2021	Annual	06/01/2022
SPEAG	Dipole D835V2	4d165	08/03/2021	Annual	08/03/2022
SPEAG	Dipole D1800V2	2d015	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D1900V2	5d032	01/28/2021	Annual	01/28/2022
SPEAG	Dipole D2450V2	965	06/15/2021	Annual	06/15/2022
SPEAG	Dipole D2600V2	1106	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D5GHzV2	1107	07/22/2021	Annual	07/22/2022
SPEAG	Dipole D5GHzV2	1317	08/28/2020	Biennial	08/28/2022
SPEAG	Dipole D6.5GHzV2	1012	09/24/2021	Annual	09/24/2022
Agilent	Power Meter E4419B	MY41291386	10/06/2021	Annual	10/06/2022
Agilent	Power Meter N1911A	MY45101406	07/08/2021	Annual	07/08/2022
Agilent	Power Sensor 8481A	SG1091286	10/06/2021	Annual	10/06/2022
Agilent	Power Sensor 8481A	MY41090675	10/06/2021	Annual	10/06/2022
Agilent	Power Sensor N1921A	MY55220026	08/05/2021	Annual	08/05/2022
SPEAG	DAKS 3.5	1038	03/17/2021	Annual	03/17/2022
ROHDE&SCHWARZ	Signal Generator SMB100A	177633	07/05/2021	Annual	07/05/2022

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/23/2021	Annual	07/23/2022
R&S	Wireless Communication Test Set CMW500	115733	04/15/2021	Annual	04/15/2022
R&S	CMW-Z800A Up/Down converter	100218	N/A	N/A	N/A
Agilent	11636B/Power Divider	58698	02/26/2021	Annual	02/26/2022
OSI	Power Divider	#1	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#2	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#3	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#4	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#5	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#6	06/24/2021	Annual	06/24/2022
EMPOWER	RF Power Amplifier	1084	06/25/2021	Annual	06/25/2022
EMPOWER	RF Power Amplifier	1041D/C0508	06/24/2021	Annual	06/24/2022
EMPOWER	RF Power Amplifier	BBS5K8CAJ	10/05/2021	Annual	10/05/2022
MICRO LAB	LP Filter / LA-15N	10453	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-30N	-	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-60N	32011	10/06/2021	Annual	10/06/2022
HP	Attenuator (3dB) 333340A	02427	09/06/2021	Annual	09/06/2022
HP	Attenuator (20dB) 8493C	09271	09/06/2021	Annual	09/17/2022
Agilent	Directional Bridge 86205A	3140A03878	05/28/2021	Annual	05/28/2022
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/20/2021	Annual	10/20/2022
Anritsu	Radio Communication Tester MT8820C	6200695605	04/15/2021	Annual	04/15/2022
Anritsu	Radio Communication Tester MT8821C	6201502997	07/08/2021	Annual	07/08/2022
Anritsu	Radio Communication Tester MT8821C	6262044720	12/22/2020	Annual	12/22/2021
Anritsu	Radio Communication Tester MT8821C	6262287674	05/25/2021	Annual	05/25/2022
Anritsu	Radio Communication Tester MT8821C	6262287678	05/25/2021	Annual	05/25/2022
Anritsu	Radio Communication Test Station MT8000A	6262036812	12/22/2020	Annual	12/22/2021
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	02/26/2021	Annual	02/26/2022

\* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

\* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

## 21. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

## 22. References

- [1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Aug. 1996.
- [2] ANSI/IEEE C95.1 - 2005 , American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 kHz to 300 GHz, New York: IEEE, Sept. 1992
- [3] ANSI/IEEE C 95.1 - 2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz, New York: IEEE, 2006
- [4] ANSI/IEEE C95.3 - 2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: December 2002.
- [5] IEEE Standards Coordinating Committee 34 – IEEE Std. 1528-2013, IEEE Recommended Practice or Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices
- [6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.
- [7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.
- [8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. 120-124.
- [9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.
- [10] Schmid & Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.
- [11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Head Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct. 1996, pp. 1865-1873.
- [12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300 MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [13] G. Hartsgrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bioelectro magnetics, Canada: 1987, pp. 29-36.
- [14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.
- [15] W. Gander, Computer mathematick, Birkhaeuser, Basel, 1992.
- [16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Receptions in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.
- [17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.
- [18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10 kHz-300 GHz, Jan. 1995.
- [19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hochschule Zürich, Dosimetric Evaluation of the Cellular Phone.
- [20] IEC 62209-1, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation and procedures – Part 1: Procedure to determine the

specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz), July. 2016..

[21] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz) Mar. 2010.

[22] Industry Canada RSS-102 Radio Frequency Exposure Compliance of Radio Communication Apparatus (All Frequency Band) Issue 5, March 2015.

[23] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2009

[24] FCC SAR Test procedures for 2G-3G Devices, Mobile Hotspot and UMPC Device KDB 941225 D01.

[25] SAR Measurement Guidance for IEEE 802.11 transmitters, KDB 248227 D01v02r02

[26] SAR Evaluation of Handsets with Multiple Transmitters and Antennas KDB 648474 D03, D04.

[27] SAR Evaluation for Laptop, Notebook, Netbook and Tablet computers KDB 616217 D04.

[28] SAR Measurement and Reporting Requirements for 100 MHz – 6 GHz, KDB 865664 D01, D02.

[29] FCC General RF Exposure Guidance and SAR procedures for Dongles, KDB 447498 D01, D02.

## 23. Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

No.	Description
0	HCT-SR-2111-FC020-P